TRADE AND COMMERCE OF ANCIENT INDIA

(C. 200 B.C. - C. 650 A.D.)

HARIPADA CHAKRABORTI, M.A (Double), Ph.D.

Visva Bharati University

ACADEMIC PUBLISHERS

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This book, originally a thesis for the Ph. D. examination, approved by the Visva Bharati University, traces the history of India's trade and commerce, inland and foreign extending from C. 200 B.C. to C. 650 A.D. on the basis of evidences, Indian and foreign, literary and archaeological. It deals in different chapters with trade routes connecting the then India with the outside world, means of communication, ports and market-towns, export and import, trade-law and guilds, practically all the moot problems of the subject. As an original work and illuminating elucidation from the historical stand point on the mercantile life of the most interesting period of Indian history, hitherto neglected, this volume with the relevent maps will be of immense service to students and research-scholars, interested in the socioeconomic history of Ancient India.

TRADE AND COMMERCE OF ANCIENT INDIA

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S. Bhattacharya – Our Society and Education

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DEDICATED

To

THE SACRED MEMORY OF MY FATHER

late BHUDHAR CHAKRABORTI,

who inspired me to read and write,

पिता स्वर्गः पिता धर्मः पिता हि परमं तपः।

पितरि प्रीतिमापन्ने प्रियन्ते सर्व्वदेवताः॥

DEDICATED

To

THE SACRED MEMORY OF MY FATHER

late BHUDHAR CHAKRABORTI,

who inspired me to read and write.

FOREWORD

I welcome with great pleasure the publication of Dr. Haripada Chakraborti's work dealing with the history of trade and commerce, both inland and foreign, of ancient India from C. 200 B. C. to C. 650 A.D. The period is specially interesting because it saw on the one hand, India's intimate relations with many things foreign and on the other a violent reaction against foreignism. In this background the commercial life of the people passed through different phases, and Dr. Chakraborti has ably painted a vivid picture of these reactions. The book contains interesting Chapters on trade-routes connecting the then India with the outside world, guilds and other avenues leading to the successful commercial enterprises. The Chapter dealing with the trade laws, culled mainly from the Dharmaśāstras throws an insight into the orthodox attitude towards the activities of the mercantile group which, not unoften, hazarded unorthodox way of life, though considered as belonging to the category of dvijas in the society. His work, I am sure, will be considered an important contribution to the domain of Indological studies.

Sudhakar Chattopadhyaya

Professor and Head of the Department of Ancient Indian History and Culture, Visva Bharati, Santiniketan.

Santiniketan,
The 3rd August, 1966.

PREFACE

In the following pages an attempt has been made to trace the history of India's trade and commerce, inland and foreign during the period extending from C. 200 B.C. to C. 650 A.D. The period opens under great turmoil when bands of foreign hordes were successively pouring into the fertile plains of North India and thus the isolation of the country was broken. After the Kushānas established their rule, North India became a part of a vast empire that included portions of Central Asia and this had undoubtedly the effect of channelising India's commercial and colonial activities in different directions. The Gupta rule came as a challenge to agelong foreign domination and a new life throbbed among the Indians when the first Gupta emperor Mahārājādhirāja Chandragupta I ascended the throne in C. 319-20 A.D. His son Samudragupta claims acts of obedience and homage from the islanders and this possibly shows that Indian trade was now turning towards the east from the west and South-East Asia now acted as fruitful markets for Indian commodities. The process had no doubt begun under the Scytho-ḳushānas, as proved by numerous evidences but under the Guptas and their successors this trade developed into a new form.

The region lying to the south of the Vindhyas surrounded by the sea on three sides, developed maritime activities when the Sātavāhanas and the Śakas brought by their orderly government an era of peace and prosperity, resulting in intense intercourse with the Roman world. A large number of ports and market-towns grew up on the western sea-board of India and hoards of Roman coins, discovered by Sewel and others and the recent discoveries at Arikamedu focuss our attention at once on the volume of this Indo-Roman trade. It was also the age when South India's intercourse with China, South-East Asia, and other maritime countries

was gradually developing. Under the Vākātakas and the Chālukyas the trade with the west declined a little because of political disturbances in western Asia but maritime and overland—connection with Iran remained as flourishing as before. The states of the Far South excelled in this respect other parts of the peninsula.

In tracing this interesting history I have consulted all the available sources, Indian as well as foreign, literary as well as archaeological and have always avoided the tendency of theorising. I may claim that I have not stated anything which is not supported by suitable evidences.

In determining the dates of different literary works I have mainly followed, Winternitz, Keith, Srinivas Aiyengar and other savants. In case of the Arthaśāstra of Kauṭilya I have followed the middle path. While I believe that the nucleus of the work might be as early as the 4th cent. B.C., in its present shape it can not be earlier than the 1st cent. A.D., I have freely utilised the Jātakas, for competent authorities now think, the bulk of the stories (barring a few only) appear to belong to the earlier part of the period with which we are dealing here and I have ventured further to differ from Fick's theory that the Jātakas portray a picture of India in the time of Lord Buddha. Similarly I have utilised references from early Tamil works, available to me, putting special emphasis on Silappadikāram and Maṇimekhalai, for they may be safely assigned to the period under review.

In Chapter I, I have elaborately discussed about the trade-routes connecting India with the Outside World. The means of Communication are traced in Chapter II. In Chapter III an account of ports and coastal marts of India has been given in the frame-work of the present linguistic divisions, while in Chapter IV I have discussed about the important inland towns situated along the high roads of the north and the south (Uttarāpatha and Dakşināpatha). The Chapters V and VI contain elaborate discussion on the exports and imports

through Indian trade. In Chapter VII dealing with trade-laws I have to depend mostly on the Dharmaśāstra works, though I admit that they often preach the ideal rather than actual facts. But it should be noted that they show at least the tendency of the age and wherever possible, I have tried to corroborate the Dharmaśāstra indences by other evidences of more tangible nature. In Chapter VIII dealing with corporate activities in the sphere of trade and commerce I have tried to show that many of the characteristic features of such activities had been a legacy of the earlier period, though in the period under review the whole thing was crystallised into a definite shape.

I pay my tribute of respect to my revered Gurudeva Prof. Sudhakar Chattopadhyaya of Santiniketan who kindly allowed me to work under him as a Research student of Visva Bharati University and guided me all along with his paternal care. I am thankful to Dr. Bimal Kumar Dutta, our respected Librarian who kindly helped me by bringing some of the reference-books, not available here from the National Library Calcutta. My thanks are also due to my Colleague Sri Santosh Kumar Basu, M.A., Adhāpaka in History, Viśva-Bharati University for helping me in many respect.

While the work was in the press, I received much help from my sons Sriman Prasanta and Susanta for proof reading.

I am also indebted to my favourite student Sri Satya Kinkar Sain, M.A., now working as Sub-editor, Hindusthan Standard in Calcutta, for the preparation of the Index, a task of great labour willingly shouldered by him.

My thanks are equally due to Rajenda and his son Sri Bimal Kumar Dhur, the proprietor of Academic Publishers of Calcutta for bringing out this book with relevant maps.

Haripada Chakraborti.

Naivedya,
P. O. Bolpur.
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ABBREVIATIONS

In the present thesis the following abbreviations have been chiefly used.

A. G. I. ... — Ancient Geography of India (Cunningham), ed. S. N. Majumdar, Calcutta, 1924.

Amarakoṣa ... — T. Ganapati Śāstri, 1914, Trivandrum.

AS. or Kau ... — Kauṭilya's Arthaśāstra, ed. R. Shamasastry.

Anc. Hist. Dec. — Ancient History of the Deccan.

A. S. I. ... — Archaeological Survey of India.

A. S. R. ... — Reports of the Archaeological Survey of India.

Arch. Dis. L. G. Valley—Archaeological Discovery in the Lower Ganges Valley. (Calcutta University).

Bau. ... — Baudhāyana Dharma Sūtra.

Beal. ... — Buddhist Records of the Western World by Beal.

Bomb. Gaz. — Bombay Gazetteer.

Bṛh,-S. Bṛhaspati-Smṛti— Edited by K. V, Rangaswami Aiyanger, Baroda Oriental Institute 1941.

Bṛhajjātakam — Trans, by Svāmī Vijñānanda, Allahabad, 1912.

Bṛh ... — Bṛhaspatismṛti., ed. K. V. R, Aiyanger, Baroda Oriental Institute, 1941.

Brih. Up ... — Bṛhadāraṇyaka Upanishad.

Bud. Ind. ... — Buddhist India.

Buddhist Records of the Western World — Trans. from the Chinese of Yuan Chwang by S. Beal, Vol 1 & II, 1884.

B.M. Cat. or C.I.C.A.I. — British Museum Catalogue of Indian Coins, Ancient India, by Allan. 1936.

B. M. C. ... — Catalogue of Coins in the British Museum by P. Gardner, 1886.

Com. Hist. Ind. — Comprehensive History of India.

Com. H. I. ... — Commerce between the Roman Empire and India, Warmington.

Comp. Gram. Drav. Lang ... — Comparative Grammar of Dravidian Language.

C.H.I. or Camb. Hist. Ind. ... — Cambridge History of India (Vol. I).

Com. Prod. Ind. — Commercial Products of India (Watt).

Dha. ... — Dhammapadatthakathā (P.T.S.).

Dīgh. Nik. ... — Dīgha Nikāya.

Divya, ... — Divyāvadāna (Ed. Cowell).

Ep. Ind. ... — Epigraphia Indica.

Ep. Carn ... — Epigraphy Carnatica.

Eco. Geo. ... — Economic Geology of India by Ball.

Ency, Brit. ... — Encyclopaedia Britannica.

G. B, I. ... — The Greeks in Bactria and India by Tarn.

G. A. M. I. — Geography of Ancient and Mdiaeval India by D. C. Sircar.

Gerini. ... — Researches on Ptolemy's Geography of Eastern Asia. by Gerini.

H. C. — Harṣacharita Trans. by Cowell and Thomas. (C & T).

I.H.Q. ... — Indian Historical Quarterly.

Ind. Anti. or I.A. — Indian Antiquary.

Imp. Gaz. ... — Imperial Gazetteer.

Inter. Ind. W. W. or Rawlinson. — Intercourse between India and the Western World by Rawlinson.

Isi. ... — Parthian Stations by Isidore of Charax. Ed. by Schoff.

Jat. or J. ...	— Jātaka. Ed. Fausball.
Jolly ...	— Hindu Law and Custom.
Jour, R. A. S, or J. R. A. S. ...	— Journal of the Royal Asiatic Society.
J. A. O. S. ...	— Journal of the American Oriental Society.
Jour. Bomb, Br. R. A. S.	— Journal of the Bombay Branch of the Royal Asiatic Society.
J. B. R. S. ...	— Journal of the Bihar Research Society, Patna,
J. And. Hist, R. S.	— Journal of the Andhra Historical Research Society.
J. U. P. Hist, Soc.	— Journal of the United Provinces Historical Society.
Jour. Ind. Soc Ori. Art.	— Journal of Indian Society of Oriental Art.
J. D. L. ...	— Journal of Department of Letters.
J. A. S. B. ...	— Journal of the Asiatic Society of Bengal.
Jour. Hell. Stu.	— Journal of Hellenistic Studies by Tarn.
Kādambarī ...	— Trans. by C. M. Ridding.
Ling. Surv. Ind.	— Linguistic Survey of India by Grierson.
Lud. ...	— Lünders—A List of Brāhmī Inscriptions from the Earliest Times to about A.D. 400.
M ...	— Majjhima Nikāya.
MA. ...	— „ „ —Commentary
M.A.S.I. ...	— Memoirs of the Archaeological Survey of India.
Mbh. (ed. Bhandarkar)	— Mahābhārata, ed. (Poona) Bhandarkar Oriental Research Institute.
Mbh (H.D.S.)	— Mahābhārata, ed. Haridas Siddhanta-Vāgīśa.

Mbh (P.C. Roy)	—	„ Pratāp Chandra Roy, Calcutta, 1809 Śak.
„ (P.T.) ...	—	Mahābhārata. (Panchanan Tarkaratna. Bangavasi Ed. Calcutta, Śak, 1826.
„ (ed. Calcutta)	—	Ed. by Nimchand Siromani, Calcutta, Baptist Mission Press, 1836.
Mod. Rev. ...	—	Modern Review.
Milinda ...	—	Milindapañha.
Marshall ...	—	Guide to Taxila by Marshall.
P.T.S. ...	—	Pali Texts Society.
Peri. ...	—	The Periplus of the Erythraean Sea. Ed. and trans. by Schoff.
Pliny. ...	—	Natural History by Pliny.
P.H.A.I. ...	—	Political History of Ancient India by H. C. Raychaudhuri, Calcutta 1938.
Ptol. ...	—	Ptolemy's Geography ed. S. N. Majumdar.
P. M. ...	—	Pūrvamegha (Meghadūtaṁ)
Raghu ...	—	Raghuvaṁśam.
Rāmā. ...	—	Rāmāyaṇa. Baṅgavāsi ed.. Calcutta.
Rostowzev. ...	—	Social and Economic History of the Hellenistic World, 3 vols.
S. B. E. ...	—	Sacred Books of the East.
Schoff. ...	—	Periplus ed. and trans. by Schoff.
Śilapp. ...	—	Śilappadikāram. ed, & trans. by Dikṣitar.
Strabo. ...	—	Strabo's Geography,
Sat. Brah. ...	—	Śatapatha Brāhmaṇa.
Soc. Org. in N.E. Ind.	—	Social Organisation in North East India by Fick.
S. S. ...	—	Successors of the Sātavāhanas by Dr. D. C. Sircar.
Studies in Ind, Hist. Cult.	—	Studies in Indian History and Culture by Prof. U. N. Ghosal.

S. G. A. M. I. — Studies in the Geography of Ancient and Mediaeval India—D. C. Sircar.

S. H. A. I. B. — Some Historical Aspects of the Inscriptions of Bengal by Dr. B. C. Sen.

Śānti. ... — Śāntiparvan of the Mahābhārata.

VV ... — Vimānavatthu (P. T. S.)

VVA ... — „ Commentary (P.T.S.)

Yājñavalkya with Comm. of Vijñāneśvara— ed. Vāsudev-Śarman (N. S. Press, Śak. 1848)

TAMIL REGIONS
MYSORE
CEYLON
URAL MTS
TIBET
ASIA
SERES
SIAM
TRADE ROUTES
ARABIA
ETHIOPIA
BAY of BENGAL
SUMATRA
BORNEO
ANNAM

CHAPTER I

Trade-routes and Intermediaries

(i)

Trade-routes between India and the Western countries.

At the outset we shall deal with the trade-routes through which India established her commercial contact with the outside world in the period between C. 200 B.C. and C. 650 A.D.

Even before the rule of the Achaemenids in India, India had maintained faint links with Western Asia and Iran. The pre-historic Indusvalley culture shows India's connection with the land of Sumer. The Ṛgveda alludes to Iran and it runs parallel with the Avesta, the earliest document of the Iranians, showing thereby India's close relationship with the western Asia (*C.H.I.I.* pp. 322-36). Kennedy (*J.R.A.S.*, 1898, pp. 241-288). points out that as early as the 7th century B.C. India had been maintaining her commercial relationship with Assyria and Babylonia.

When *India* became part of the Achaemenid empire which extended in the west upto Asia-minor and Egypt, India's isolation was broken and she had the chance to come into closer contact with the western world. India's contact with the areas beyond her border was maintained through the N. W. passes. Pāṇini refers to the "Uttarāpatha" ("Uttarāpathenāhṛtaṃ cha"), i.e. the Oxus-Ganges road which was connected with the network of roads of the Achaemenid empire. The above rule is applied for the formation of the word "Auttarapathika" with the Taddhita suffix "ṣkan" to mean merchandise brought by Uttarāpatha. The word "cha" in the sūtra signifies that the word, so formed, also means the traveller passing by that route. Northern India gradually came to be known as Uttarāpatha, probably after this road. Rājaśekhara, however

uses the term in a restricted sense to denote the region lying on the other side of Pṛthūdaka (Kāvyamīmāṃsā, ch. xvii. p. 93), inhabited by the Gandhāras, the Yoṇas, the Kambojas and other wild tribes. Dr. Sudhakar Chattopadhyaya has rightly shown that the title of the Uttarāpatha is evidently due to the fact that some of the Achaemenid roads ran through this region. (*The Achaemenids in India* - p. 57).

Besides this landroute, the sea also played a prominent part to connect India with the western countries. Mrs. Rhys. Davids thinks that "the early commerce between India and Babylon was largely via the Persian gulf." (C.H.I., I. p.294). The use of the sea-route is attested by Herodotus (iv. 44) who writes--"wishing to know where the Indus emptied itself into the sea, Darius sent a number of men under Skylax of Caryanda to sail down the river Indus. They started from the city of Caspapyros (in Gandhāra) and sailed down the river to the sea".

Here they turned westward and after a voyage of 30 months reached the place from which the Egyptian King— . . .sent the Phoenicians to sail round Lybia. After this voyage was completed, Darius (521-485 B.C.) conquered the Indians and made use of this sea (the Indian ocean). It may not be unlikely that Darius conquered the region first and then ordered the navigation of the Indus for the facility of trade. However, this adventure of Skylax brought to more distinct light India and the Red-sea route to the Western world. Henceforth the Indians of the western borderland took more interest in this maritime trade, for which Bodhāyana (C 400 B. C.) condemned the Samudra-saṃyāna as one of the peculiar practices of the Northerners. (*I.H.Q.*, vol. xxvi. No. II. June 1950. pp. 102).

The Baberu Jātaka, which may be placed in the Achaemenid period speaks of the adventures of some Indian merchants who first took peacock, now recognised as the national bird of India, by sea to Babylon. Herodotus also speaks of the importation of this splendid bird into Greece.

Alexander wished to improve and cheapen the means of communication by sea and thereby unite the richest and most prominent parts of his empire, India, Babylon and Egypt. He sent Nearchus to explore the Persian Gulf and the sea-route from India to Babylon with an eye to secure the channel of trade between India and Mesopotamia. Similarly he intended to explore the south Arabian coast to connect India with Egypt. He had inherited the roads from the Persians. Most of his colonies were set up with an eye to their economic value. His 'Poleis' were all commercial centres, connected by excellent 'royal roads'.[1]

The trade of Greece with East Africa, Arabia and India was subsequently carried on both by sea and caravan, partly under the Ptolemies. In the 2nd century B.C., the eastern portion of the Asiatic trade-routes to India passed through the kingdom of the Parthians who controlled the Caspian sea and the Persian gulf. In the west, the Seleucids controlled the South-Arabian trade from the ports of Palestine and Phoenicia. The Ptolemies retained their control over the Red-sea routes of the Indian and South-Arabian trade[2].

Now let us begin our enquiry with reference to the Roman world which became the centre of commercial activities at the dawn of the Christian era.

India and Rome:—

Augustus rose to the imperial power in c 27 B.C. and established his rule over a vast empire including various races of the west, the Middle-east and of the North-east Africa. Hence Rome became ripe and ready for further developments in the intercourse of men and she backed her merchants with *capital*, who pushed themselves with fresh enthusiasm into the East both by land and water. India was at that time a mere disjointed aggregate of political units without any uniting force. Central India *with both coasts* was under the Sātavāhana rule

1 *Social and Economic history*, Rostowzev, Vol. I, pp. 133-134.
2 Rostowzev, Vol. II, p. 1243 ff.

and the North-west was in *utter chaos* and confusion, the Graeco-Bactrians, the Śakas and the Kushānas coming one after another and the successors quarrelling and driving out the predecessors.

The commerce between Rome and India in the initial stage was conducted through intermediaries. The most important middlemen and carriers were (i) the Greeks, specially of Egypt; (ii) Syrians, Jews and other peoples of Asia Minor and (iii) Armenians and Caucasian tribes. These three types of people were either subjects of Rome or allied to her. Besides these, the Arabians, the Auxumites and the Somalis also acted as intermediaries. They were not under Rome in any way and hence they wanted that the trade between India and the West should be carried not directly but through them, their geographical position being midway between Rome and India. They controlled the entire traffic between the east and the west with a view to conceal the actual sources of treasures of India and China from the Greeks or Romans; with an eye to gain more profit by acting as middlemen. The last rival but not of the least importance was the Parthians, rulers of Iran, who put the greatest difficulty standing as an insurmountable barrier to the free passage of the Romans to India[3].

Rome and India were brought closer together through the Persian gulf and the Red-sea. By one of these routes, Prof. Maiuri suggests, the Indian ivory might have reached the shore of Campania. He discovered in Oct. 1938 an ivory statuette, identified with Lakshmi, at Pompeii, which he took to be purely an work of Indian art of C. 79 A.D[4].

The Red sea is within the nearest distance from the Mediterranean sea through the Heroopolite gulf. Most of the middlemen, mentioned above, lived in the regions by the side of the Red sea and the Persian gulf. All the routes from

3 *Commerce between the Roman empire and India*, Warmington. p. 2.

4 *Annual Bibliography of Indian Archeology*. Vol. XIII, 1938.

India or China to Rome converged at the strip of land formed by Asia minor, Palestine, Arabia and also by Egypt. Merchants from east to west met together and took away merchandise through this portion of the world. Hence we should find out the different routes along which they plied and passed goods from one corner to the other.

Rome and the Middle-east:—

Rome led at first an agricultural life but with the rise of her imperial power over a vast area she took to trade. Tht old frugal life of the Romans was soon replaced by the life of luxury and hence to satisfy the crying need of the Romans for the things of luxury Rome sent her merchants to different parts of empire. Rome had two ports, Ostia and Puteoli. Ostia[5] was "harbourless" and a more dangerous one for the silting up of the Tiber, "which was fed by numerous streams." Strabo, however, says that "the good supply of the tenders makes it possible to sail away quickly before they touched the river, or else, after being partly relieved of their cargoes, they sail into the Tiber and run inland as far as Rome." (V. 3.5.) Hence Puteoli (formerly 'Dicaearchia') was better used as a safer harbour where "the greatest merchantships could moor with safety;"[6] and it was an important centre of transhipment to different provinces of Italy and it was ever filled with ships plying with Alexandria and Syria[7].

Warmington (p. 5) points out three routes from Puteoli to the Middle-east. First it was "from Brundisium across the Adriatic, along the Via Egnatia and across to Bithynia or Traos, whence great routes to the Far East could be reached at Sardis, Tarsos, Antioch and other centres—a slow journey but available throughout the year." The second route was "from Italy to Ephesos by way of Corinth and Athens or

5 Strabo. V. 3.5.
6 " V. 4.6.
7 Strabo, XVII. 1.7.

round the Peloponnese to Asiaminor and Syria—a route used in summer by sightseers and traders with Greece." "The first part of the Egnatian road passes through Lychnidus, a city (mod. Ochrida) to Pylon and the second part from Pylon to Barnus through Heracleia... as far as Thessaloniceia,," a Macedonian city, the most populous city of the time." [8] The third was a direct route "from Rome or Puteoli to Alexandria." the centre of transhipment of Indian wares from the Red sea and even from Antioch. This route was used specially from May to September.

Egypt:—Now let us enquire into the trade-routes of Egypt, the hinterland of Alexandria. Alexandria was founded at the mouth of the river Nile by Ptolemy Philadelphos to serve the Egyptian merchants who had already established an indirect trade with India. Strabo says that "as for the great harbour, in addition to its being beautifully enclosed both by the embankment and by nature, it is not only so deep close to the shore that the largest ship can be moored at the steps but also is cut up into several harbours." He describes the advantages of this city's site—"washed by two seas on the north and south and filled by many canals from the Nile through which the imports are much larger than those from the sea." (XVII.I.7).

Journey from Alexandria to India[9] was carried on by two ways, one by the Red sea and the other avoiding it as far as practicable. The Red sea with its treacherous Hiroopolite gulf proved very dangerous for storms and pirates. Hence the merchants preferred the route by the Nile. They navigated this river southwards for about 11 days in fair weather up to the horse-shoe bend of the river. Caenepolis (Kenah) and Coptos (Keft) were two important stations on the Nile, from

8 Strabo VII. 7.4—Strabo says that "from Apollonia to Macedonia one travels the Egnatian road. towards the east. measured by Roman miles and pillars as far as Cypsela and the Hebrus river."

9 Dion Chrysostom speaks of Indian merchants at Alexandria whom he saw there as attending the spectacles with the Alexandrians. Rawlinson, *Inter. Ind. W. W.* p. 140.

which roads struck out towards the Red Sea. One road connected Caenopolis with Myos Harmos ((Mussel harbour, now identified with Abu —Scha'ar) and another Coptos with Berenice.[10] The former was 7 days' journey and the latter 12 days'. Both the ports of Myos Harmos and Berenice on the western bank of the Red sea were founded by Ptolemy Philometor (181-145 B.C.) as havens. When Strabo wrote under Augustus, Myos Hormos was more important as a naval station but when Pliny wrote under Nero and Vespasian, Berenice, "deep inland on the recess of the gulf"[11] with its better landing places proved to be far superior. It may not be unlikely that both these ports were simultaneously used, Berenice as a centre of unloading and Myos Hormos as a good natural harbour for vessels, "a large harbour with a winding entrance near three islands, filled with olive trees and guineafowls."[12] The two roads, mentioned above, cut each other and passed through the desert. They were used by travellers on camels at night.[13]

Pliny's narrative may be quoted here:—"Two miles distant from Alexandria is the town of Juliopolis. The distance thence to Koptos, up the Nile is 309 miles; the voyage is performed, when the Etesian winds are blowing, in 12 days; From Koptos the journey is made with the aid of camels, stations being arranged at intervals for the supply of fresh water. The first of these stations is called Hydreuma (watering place) and is distant 22 miles. The second is situated on a mountain, at a distance of one day's journey from the last; the third is at a second Hydreuma distant from Koptos 85 miles; the fourth is on a mountain; the next to that is ano-

10 Pliny, VI. 101-4.
11 Strabo, XVI. 4.5.
12 " " " ". Pliny, VI. 103 & 168.
13 An Indian named Subhānu is heard of in an inscription to have halted at the temple of Pan at Redesiya at the end of the route from Berenice to the Nile. Warmington, — p. 77. Cf. Ind. Ant., III. 229 n. Hultzsch, J.R. A. S., 1904, p. 402.

ther Hydreuma, that of Apollo, and is distant from Koptos 184 miles, after which there is another on a mountain. There is then another station at a place called the New Hydreuma, distant from Koptos, 230 miles and next to it, there is another called the old Hydreuma or the Troglodytic, where a detachment is always on guard, with a caravansary that affords lodging for 2000 persons. This last is distant from the New Hydreuma 7 miles. After leaving it, we come to the city of Berenice, situated upon a harbour of the Red sea and distant from Koptos 257 miles. The greater part of this distance is generally travelled by night, on account of the extreme heat, the days being spent at the stations; in consequence of which it takes 12 days to perform the whole journey from Coptos to Berenice." [14]

There was a network of roads across the desert between the Nile and the Red sea, intersecting the two main roads mentioned above. The Caenepolis-Myos Hormos route branched off at Aras towards Philoteras on the Red sea just south of Myos Hormos. Another route branched off from the Coptos-Berenice road at Phonenicon leading to Leucos Limen, standing further south of Philoteras. Besides these, a track from Rodesiya on the Nile joined the Coptos-Berenice road at Phalacro and another from Ombos was found joining that route at Apollonos (Wadi Gemal). Nubia, south of Egypt was beyond the Roman influence, with Meroe as its important centre from which also another route ran towards Ptolemais, standing further south of Berenice.[15]

These routes were trodden from the days of the Ptolemies and the Romans kept them intact. The Romans left them unpaved for camels and maintained the Ptolemaic division of the mainroads into stages with fortified supply-stations, cisterns and armed guards. The roads were well equipped with large caravansaries and hotels for travellers. The Periplus (1,18 and

14 Pliny. VI. 102-3.
15 Ptol, IV. 5-14. 73; 7.7. — Strabo, XVI. 4.5. ff.

19) mentions both Mussel Harbour and Berenice as harbours of Egypt. Berenice was connected with another market-town, "Ptolemais, about 4,000 stadia from Berenice." (Peri. 3.). The town of Ptolemais, 'near the hunting grounds for elephants' was founded by Eumedes.[16] Ptolemais had no harbour and was reached by only small boats and below it was Adulis (Peri. 4), a port established by law; which was connected with an inland town Coloe (Peri. 4), the first market for ivory and again with Auxum, the city of the Auxumites.

Choice of routes varied most probably according to one's tastes and proximity of one's habitation. Those who chose to risk the dangers of the sea and pirates, used the sea-route from Alexandria to Arabia Eudemen through the Red sea. A journey of 7 days from Alexandria along the Wadi Toumilat and by way of the Bitter Lakes, led the merchant to the Hiro-opolite gulf (Gulf of Suez). Ptolemy II had first cleared out the deep canal and added locks to prevent flooding from the Red sea and founded Arsinoe or Cleopatris. Augustus re-paired it afresh. But the south wind and shoals were much distressing to the travellers.[17] Pliny[18] notes three land-routes from the Egyptian sea—one from Pelusium across the sands following the line of reeds, the second route beginning two miles beyond Mt. Cassius and after 60 miles, rejoining the road from Pelusium and a third starting from Gerrum, called the Agipsum route; all these routes led to Arsinoe. The sea-route from Arsinoe to the strait of Babel Mandeb was again connected with side-tracks upto Aela and Leuce come on the east coast. Aela was joined by a road with Petra and through Petra with Gerrah on the Persian gulf.

It is interesting to note that the Romans preferred the Red sea route to the land routes to India for the following reasons.

16 Strabo, XVI. 4.7.

17 Rawlinson, History Anc. Egy., II. 297-8; 472-4; Pliny, VI. 167; Ptol. IV. 5. 14.

18 VI. 165-8.

Parthia was a strong rival standing midway on the land route. The Scythians also had settled in throughout Central Asia. Besides, the land-route was more expensive and time-taking for its enormous length. Hence Augustus took steps to make the Red sea journey more convenient and profitable. His measures on the Egyptian routes to the Red sea have been already mentioned. He made all sorts of arrangements for the realisation of dues at the harbours on the Red sea. His plan of circumnavigating Arabia by two fleets, one from the Persian gulf and the other from the Red sea is well-known. He maintained a Roman fleet at the Red sea.[19] His expedition to S. Arabia in 25 B.C. under Aelius Gallus, though disgraced with failure, was meant for controlling the Sabaeans and the Ethiopians, the rivals in the field of Indian commerce.

ARABIA:—The geographical position of Arab helped the Arabians to take lead in the commercial life of the ancients. Ezekeil speaks of the Arabs as traders (XXVII. 21). The Arabs supplied the Egyptians with Indian goods to be sent to Rome. The Sabaeans of Yemen (South Arabia) prospered as traders with their capital at Mariba and mart at Arabia Eudaemen, the only safe and shoal-free harbour between Suez and India, the meeting ground of all nations, particularly of Egyptian Greeks and Indians. (Peri. 26). The Sabaeans and the Gerrhaeans of the Persian gulf prospered as traders and the chief intermediaries for a long time between the east and the west. They made use of both sea-route and land-routes through the desert of Arabia. Strabo, following Artemidorus notes that "the masses of the country of the Sabaeans traffic in aromatics.... From their trafficing both the Sabaeans and the Gerrhaeans have become richest of all; they have a vast equipment of both gold and silver articles, viz. couches, bowls etc., and costly houses."[20] They kept the Indians away from the Red sea and kept secret from the Greeks the use of the

19 Pliny, XII. 56; II. 168; VI. 141-160.
20 XVI. 4. 19.

monsoons. "About 115 B.C. the power passed to the Himyarites of the extreme S. W. of Arabia and the two came to form one people under one king."[21] Besides, the kingdom of Hadramaut passed oriental goods to the Nabataeans, i.e, the Arabs of the Suez and the N. W. of Arabia, who served as an intermediary between India and Rome and exerted a great influence down the Red sea coast upto Leucecome and also upto the Euphrates along the borders of Syria and Arabia. Practically speaking, the Nabateans won the most enviable position and could easily prosper by bitumen trade with the Egyptians, by caravan trade with the Persian gulf, with the Sabaeans and with Hadramaut. Rostowzev remarks that the Nabataeans adopted measures to safeguard the caravan routes to Babylonia. He says that "the native Arabs, reinforced by the Nabataean colonies protected the caravans and secured their water-supply," as evidenced by a Nabataean inscription found between Dumatha and Forat[22] Petra[23] was their capital; it was, according to Pliny, 600 miles from Gaza and 635 miles from the Persian gulf. It was the centre of so many routes, the first leading to Leuce Come Via Aela, receiving wares to be diverted to Rhinocula of Egypt and to Gaza on the Mediterranean sea; the second connecting it with Bostra, Damascus, Palmyra, and other important centres of Syria and the third leading across Sinai to Arsinoe; besides the greater roads from Petra to Gerrah, and through northern deserts to Farath and Charax. Pliny says that "Forat on the bank of the Pasitigris, is resorted to by people from Petra, who make the journey from there to Charax, a distance of 12 miles by water, using the tide."[24] Roads ran also from Petra to S. Arabia, one via Leuce Come to Arabia Eudeman and to

21 Warmington, Chap. 1. p. 11.

22 Rostowzev, Vol. II, p. 867.

23 "During the first two cent. A. D. it was the seat of an immense commerce, the great emporium of Indian and Chinese commodities." (Hirth - *China and the Roman Orient*. p. 160.)

24 VI. 144-5.

Hadramaut by coastline and another to Hadramaut by an inland way. Both Indian and Chinese goods were carried by these routes. A regular camel-traffic was found by Strabo between Petra and Leuce Come. Strabo[25] says that "the overland journeys (in Arabia) are made on camels through desert and sandy places, and on these journeys there are also many reptiles to be seen." Leuce Come was both a port on the Red sea and a station on the caravan track. Petra is connected with the White village, a harbour and a fortified place by a road, just east of Myos Hormos across the adjacent gulf. The Periplus (19) speaks of this mart with vessels of Arabia, with "a centurion stationed there as a collector of $\frac{1}{4}$ of the merchandise imported and with an armed police as a garrison."

Now let us enquire into the route from Arabia Eudemen towards India along the southern coast of Arabia. The Periplus (27) mentions Cana, a coastal mart connected by a road with the metropolis, Sabbatha. Cana was a storehouse of all frankincense, local produce brought by camels and also by rafts and boats. The Periplus speaks of its "trade with Barygaza and Scythia and Ommana and the neighbouring coast of Persia." (27). Next to Cane, Moscha is mentioned therein (32) with "ships returning from Damirica and Barygaza."

It is interesting to note in this connection the different stages of routes connecting Arabia with India which Pliny has shown in N. H. (VI. 96-100). In the first two stages Pliny shows the shipping along the coast of Arabia, Persia and Carmania with Barbaricum and Patala as the terminus. Barygaza and Sigerus rose to importance in the period of the 3rd stage, i.e. beginning about 70-50 B.C., according to Tarn, when the direct voyage between the Arabian coast and Barygaza, cutting out Demetrius-Patala was introduced. In the period of the 4th stage, i.e. after C. 50 A.C. and in the

25 XVI. 2. 30.

first two centuries of the Christian era, ships went straight from Arabia Eudemen to Muziris and Nelcynda, ports of South India exchanging Roman coins for pepper and aromatics. (Cf. Tarn, *G.B.I.*, pp. 368-370).

Pliny's narrative may be quoted here:—

"There (at Susa) after 3 months" voyaging they (Onesicritus and Nearchus) found Alexander celebrating a festival; it was 7 months since he had left them at Patala. Such was the route followed by the fleet of Alexander; but subsequently it was thought that the safest line is to start from Ras Fartak in Arabia with a west wind (Hippalus) and make for Patala, the distance being reckoned as 1,332 miles. The following period considered it a shorter and safer route to start from the same cape and steer for the Indian harbour of Sigerus (Jaigarh), and for a long time this was the course followed, until a merchant discovered a shorter route and the desire for gain brought India nearer; indeed the voyage is made every year with companies of archers on board, because these seas used to be very greatly infested with pirates."[26]

Routes of the Middle-east to India:—

Let us begin our enquiry with Syria, which was probably the greatest manufacturing centre in the ancient world. The Chien-Han-Shu (ch. 96 a), written about 90 A.D. embracing events from 206 B.C. to 25 A.D. describes the country of Ta-tsin (Syria), also called Li-chien; "It contains over 400 cities. The country contains much gold, silver and rare precious stones ...corals, amber, glass ... gold embroidered rugs and thin silk cloth of various colours. They make gold-coloured cloth and asbestos-cloth. They have fine cloth, made from the cocoons of wild silk-worms. They possess storax. All the rare gems of other foreign countries come from there. ... They traffic by sea with Parthia and India, the profit of which trade is tenfold. They are honest in their

26 Pliny, — VI. 99-101.

transactions and there are no double prices." Antioch was the capital of Syria, the meeting place of merchants of many countries, specially the Romans who settled there in large number. Here met the great over-land routes from India and China and also the routes from Smyrna or Ephesos by land through Phrygia, Pisidia and Cilicia.[27] Rostowzev also points out that "Ephesos, Smyrna, Miletus and many other cities on the great roads from Syria to the coast of Asia Minor derived a large part of their revenue from the transit trade, as a result of their connection with the Syrian territory and through it with India, Persia and Arabia."[28] "Roads radiated from Antioch, in all directions, westwards to Cilicia and so to Byzantium, eastwards to Palmyra, the Euphrates and Babylon, northwards to the imperial crossings of the Euphrates at Samosata and Zeugma and to the iron and stone-quaries of these regions. After Trajan's time five routes converged on this city and here was a seat for the exaction of customs duties."[29] When Trajan added Arabia Petraca to the empire, "a splendid system of paved roads sprang up east of the Jordon, connecting the more important centres. The main roads of Syria and Judea were carefully paved and set in order and garrisons placed at suitable points."[30]

One might have coasted from Ephesos to Antioch. Ephesos was also connected by a road through Phrygia, Lycaonia and Cappadocia with Melitene, near which the Euphrates was bridged at Domisa.[31] The most useful road of North Asia Minor ran from Smyrna through north Phrygia, Galatia, South Pontus, and Lesser Armenia to Eriza. The Euphrates and the Tigris watering Mesopotamia helped her trade to no less extent. Roads ran by or across these

27 Warmington, — p. 18.
28 Rostowzev. — Vol. I. p. 532.
29 M. P. Charlesworth. — *Trade-routes and commerce in the Roman empire*, — p. 38.
30 Ibid — p. 41.
31 C. Skeel. *Travel in the first century*, p.p. 118-120. Map p. 111.

rivers. The route from Antioch through Samosata and Zeugma continued south-eastwards along the Euphrates to Seleucia and Ctesiphon on the Tigris. We hear of merchants using the route through north Mesopotamia from Samosata and Zeugma to Nineveh on the Tigris and then turning to Seleucia or proceeding to Ecbatana to reach the main route to India or China.[32] Arrian records that at Thapsacus Alexander found the river Euphrates covered by two bridges... He crossed the river and "continued inland keeping on his left the Euphrates and the mountains of Armenia, through the country called Mesopotamia. But on leaving the Euphrates he did not lead direct on Babylon, since going by the other road he found everything more convenient for the troops..... and for the horses.... On hearing that Darius was encamped on the river Tigris, Alexander hurried off towards it; but he saw neither Darius nor his guard. Yet he crossed the river and... passed through the country of Aturia with the Gordyaen mountains on his left and the Tigris on his right.[33] Strabo[34] speaks of the village Gaugamela in Aturia, where Darius was conquered, as "camel's house" and says that the estate was so named "for the maintenance of the camels which helped most on the toilsome journey through the deserts of Scythia." Hence we may assume that camel was the fittest vehicle for this portion of the land.

Of three routes to India from the west, the Red-sea route, the Persian-gulf route and the overland route, the Romans preferred the Red-sea route for its being free from difficulties of desertways and from Parthian rivalry. The Persian gulf was very often under the control of the Arabs or the Parthians. It was, as now, approached by the Euphrates and the desert roads. Strabo gives the account of the Persian

32 Arrian, Anab. III. 7.
33 Arrian, III. 7.
34 XVI. 1.3.

gulf, as given by Eratosthenes. Before the imperial period of Rome the merchants of Gerrah controlled the traffic in spices across the desert upto Petra and also up the Euphrates upto Thapsacos. Strabo[35] says that "the Gerrhaeans traffic by land, for the most part in the Arabian merchandise and aromatics, though Aristobulus says, on the contrary, that the Gerrhaeans import most of their cargoes on rafts to Babylonia and thence sail up the Euphrates with them and then convey them by land to all parts of the country." But in the imperial period Gerrha was superceded by Charax Spasinu at the mouth of the Tigris. Charax was founded by Alexander the Great but destroyed by rivers and then restored by Antiochus, king of Syria. It was again damaged and restored by Spaosines. Originally it was within 1¼ miles of the coast and equipped with a harbour but it was placed about 120 miles from the sea in the 1st cent. A.D.[36] It was linked with the silk-route at Seleucia, by river and road with Palmyra[37] and Syria and by a desert route across N. Arabia with Petra.[38] Rome sent embassies to Charax.[39] Charayx Apologos and other harbours traded with Kabul and the Punjab by land route and with the lower Indus valley and

35 XVI. 3.3.

36 Pliny, (N. H.) VI. XXXI. 136-39.

37 (a) Hadrian granted special privileges to Palmyra after his visit in 130 A. D. The Bulk of its trade consisted in oils; its rise and prosperity between 130 and 273 A. D. is due to its position on the shortest route between India and Rome, midway between the Roman and Parthian empires and to protection to the caravans.

(Cf. Warmington. p. 100).

(b) The inscriptions found by H. Seyring in the agora of Palmyra show the heavy customs duties levied in Roman times on the Parthian frontier. This may be a protection tariff to divert Indian goods from land routes through Parthia to the sea route to Egypt.

(Cf. Rostowzev, Vol. III. p. 1648).

38 Pliny, VI. 140—145.

39 " " 140.

Broach by sea.[40] Pliny describes the course of the Tigris, its split into two channels and their subsequent reunion, and says that "it is joined by the Kerkhah from Media and after flowing between Seleucia and Ctesiphon, empties itself into the Chaldaean Lakes and then passing right to Charax, falls into the Persian sea."[41]

From Greek Seleucia and its Parthian rival Ctesiphon (the winter residence of Parthian kings) ran a road across the Zagros mountain into Media[42]; and then passing through Ecbatana (summer residence of Parthian kings') and Rhagae it reached Merv (Antiochia Margiane), the last limit of the Roman world under Augustus.[43]

The Parthians monopolised the silk-route between China and Ta-tsin (Syria) upto 166 A.D., as we learn from i) the Hou-han-su (E 32) and ii) the Wei-lio (P 24).[44] It is interesting to note here "*the Parthian Stations*," an account of the overland route between the Levant and India in the first century B.C., left by Isidore of Charax. It gives us "an itinerary of the caravan trail from Antioch to the borders of

40 Periplus, 35 & 36.

41 Pliny, VI. 122.

42 Pliny (VI. 41-43) says that "Hamadan, the capital of Media is 750 miles from Seleucia and 20 miles from the Caspian Gates." He reasons that the 'Gates' are so named because the range is pierced by a very narrow pass 8 miles long, scarcely broad enough for a single line of waggon traffic."

43 Pliny, VI. 42-43. Arrian, Anab, III. 19-20.

44 (i) "Their kings (of Syria always desired to send embassies to China but the An-hsi (Parthians) wished to carry on trade with them in Chinese silks and it is for this reason that they were cut off from communications." (Hirth — p. 42).

(ii) "They (Syrians) always wished to send embassies to China but the An-hsi wanted to make profit out of their trade with us and would not allow them to pass their country." (Hirth—p. 70).

(iii) As regards the road through Mesopotamia from Ctesiphon to Zeugma the Hou-han-shu (E. 39) records:—"One is not alarmed by robbers, but the road becomes unsafe by fierce tigers and lions who will attack passengers and unless these be travelling in caravans of hundred men or more, or be protected by military equipment, they may be devoured by these beasts." (Hirth — p. 43).

India, naming the supply stations maintained by the Parthian government for the convenience of merchants." (Schoff.—p. 17).

The route of Isidore began at Antioch, crossed the Euphrates at Zeugma (mod. Birijik), passed through the city of Apamia, Charax Sidae, Coraea, Mannuorrha with a well supplying drinking water, many other Greek cities, Artemis with a canal of Semiramis and many other villages and towns or fortified places to reach Neapolis and after leaving the Euphrates, to come to Seleucia on the Tigris, (Isi. 1), a few miles distant from Ctesiphon, the Parthian capital. The length of the route from Zeugma through Mesopotamia and Babylonia to Seleucia is stated to be 171. Schoeni.[45] The route ran further through the hills of Zagros (Isi. 3, the lower Media with numerous villages, the upper Media (Isi. 6) with the city of Concobar, Ecbatana (the metropolis and treasury of Media), (Isi. 6), Rhaga (the greatest of cities in Media) to reach the Caspian Gates (Isi. 7), then it passed through the Greek city of Apamae in the district of Choarena (Isi. 8) and through the lonely wastes of Hyrcania (Isi. 10) with stations to another great Parthian city at Hecatompylos. Hence the road ran due east to Antiochia Margiana (Merv), 'well-watered' (Isi. 14). That means the road followed the fertile valleys eastward through the modern Khorassan to the Herat river. At Merv, instead of following east to Bactra and the Pamirs, it turned south to Lake Helmund and the city of Alexandria (mod. Kandahar), "the metropolis of Arachosia," the last limit of the Parthian rule. (Isi. 19). This route of Isidore, very possibly the highway of commerce under the Parthians, suggests the interest in or regulation of commerce throughout the Parthian empire.

IRAN:—

Now let us follow the routes of Iran. Two roads, one from Babylon and Susa and another from Ecbatana met at

45 1 Schoenus = $3\frac{1}{4}$ - $3\frac{1}{2}$ miles, according to Strabo 40 Stadia.

Persepolis. From Rhagae was diverted a side-track south-eastward to Carmana. Gulaskird was the junction of the two routes, from Persepolis and from Carmana and from this place ran the main Persian road towards the Indus. From Persepolis ran another road through Carmana and Phra to Alexandropolis and Kabul, probably used by the Romans.[46] The Peutinger Table is not supposed to show any sure sign of the Makran route. Alexander's return from the Indus through the Makran route proved disastrous and hence lent it an ill reputation. People preferred the coasting voyage to the Makran route. The merchants took to the main silk-route upto Merv and then to the Herat-Kandahar route to India.

The Himalayas with all the branches stand on the north and north-west of India but they never act as any barrier to India's intercourse with the west or the north. We have so many important passes, used as routes by merchants and pilgrims of all ages. The Khawak links Badaksan with Kabul across the Hindukush range, the Irak pass links Balkh with Kabul across the Kohibaba range and the Khyber, Kurram, Tochi and Gomal passes connect Afganistan with India. Of these gates to India, one is where the mountains of Afganistan "become very narrow just north of the Kabul river," where only the Hindukush separates the basins of the Oxus and the Indus. The second is the route from Herat through Kandahar to the Indus lowlands by the Bolan or Mula pass and the third is the route of Makran.[47]

"The northern group to-day converges on the Khyber Pass, which has been a major traffic-axis since the establishment of Peshawar as a metropolis in the 2nd cent. A.D.. An earlier route followed the more northerly line of the Kabul river with Charsada, (the ancient Pushkalābatī) as its immediate goal. South of the Khyber alternative tracks used and

46 Ptol., VI. 5. 4. and 19. 4.

47 Cf. *The Gates of India* - Sir T. Holdich, pp. 48-49. 51, 69 & 87; *Camb. Hist. Ind.* Vol. I. pp. 27-9, 31.

still use Kurram valley and the Peiwar pass and further south again the Tochi, Gumal and other valleys carry ancient thoroughfares from the direction of the Gazni-Kandahar uplands. At this place, feeders from the southern group spread delta-like towards the Indus plain."[48] "The Tochi and the Gomal river must be regarded as highways of Gazni... and all the carrying trade of the Gazni province is condensed into the narrow ways of the Gomal."[49] The Zhob valley carried a modest traffic N.N.E. from Quetta. Westwards from Quetta, a camel-route led to Kirman and Iran. "Quetta, Kalat and Las Bela, standing nearly in a line from north to south were the watch-towers of the western marches.... The road from Quetta to the north-west, i.e. to Kandahar and Herat had to pass through a narrow hill-enclosed space, some 8 miles from Quetta."[50] Lasbela was one of the three focal points of the southern group. Here, now "an insignificant Baluch town..... must have stood full in the tide of human immigration into India for centuries in the past."[51]

Kālidāsa refers to the land-route by which Raghu went to conquer the Persians (Raghu 4. 60.) "Pārasikāṃsato jetuṃ pratasthe sthalavartmanā".) Mallinātha suggests that it was due to the religious ground by which sea-voyage was forbidden that Raghu preferred the land-route to Persia. Raghu who had already conquered practically the whole country of India marching along the land-route, is referred to here to proceed toward Persia along the land-route. This fresh mention of the land-route by Kālidāsa suggests that both the routes from Trikūṭa to Persia, bifurcated, one by the land and the other by the sea, were used in the Gupta period.

It is interesting to examine the report of Yuanchwang about the kingdom of Polasse (Persia): "The people are

48 *B.A.S., of India.* 1948 Jan. No. 4. p. 86.
49 Holdich - Chap. V. p. 136.
50 " - p. 139.
51 " - p. 139.

rich and affluent. The country produces gold, silver, copper, rock-crystal (sphaṭika), rare pearls, and various precious substances. Their artists know how to weave fine broeaded silks, woollen stuffs, carpets, and so on. They have many shen horses and camels. In commerce they use large silver pieces. (Beal-II, 278) .... They give themselves entirely to works of art. All that they make, the neighbouring countries value very much". Hence we may presume that India, the next-door neighbour, might have utilised the resources of Persia by the routes, mentioned above.

INDIA AND THE CASPIAN REGION.

Now let us enquire into the routes between India and the Caspian region via Bactra. There was another route from Marachanda or from Bactra, which crossed the Oxus (Amu Darya) and ran towards the Caspian sea and then either crossing or rounding it, proceeded to the Euxine sea and the Mediterranean sea. Strabo [52] says that "the river Oxus is so easily navigable that the Indian merchandise, packed over the mountains to it is easily brought down to the Hyrcanian sea and thence, on the rivers, to the successive regions beyond as far as the Pontus." He says elsewhere that "the Upper Aorsi ruled over most of the Caspian coast; and consequently they could import on camels the Indian and Babylonian merchandise, receiving it in their turn from the Armenians and the Medes and also, owing to their wealth, could wear golden ornaments." [53] This shows the heavy flow of merchandise from India or Babylon to the Caspian region in the 1st cent. A.D. by these routes. The river Cyros was also used and the route continued to the Phasis and to the Euxine and the Mediterranean seas. Another route went up the Jaraxes valley from its mouth to the Armenian city, Artaxata

52 II. 1. 15 & XI. 7. 3.
53 11. 5. 8.

and then it spread to the different parts of Asia Minor.[54] Pliny also points out this route of commerce down the Oxus and across the Caspian to the Cyros and says that Indian goods were conveyed to Phasis in Colchis by this route.[55] "The Phasis and the Cyrus were connected by a paved road of four days' travel and from the large fortress Sarpana the river Phasis was navigable; after that a few days brought men to Amisos (Eski-samsun) and Sinope (Sinab) which was served by land-routes also."[56] It is interesting to note that the Oxus flows into the Aral lake and not to the Caspian sea and hence the question naturally arises how to link between the Aral and the Caspian sea. Some scholars opine that in prehistoric days the entire region between them was under sea. However there must have been a land-route connecting the two, if the above theory is not believed to be true.[57] Strabo speaks of the bad conditions of navigation in the Caspian sea and also of the wild people of the Caspian area.[58] Pliny hints at the dangers of navigation in the Caspian sea, where the Indians were once victims to the storms and as a result ship-wrecked.[59] Some Indians, most probably fugitives came through Parthia and planted colonies in Armenia between 130 B.C. and 300 A.D.[60] This area of uncultured and wild tribes was almost free from foreign yoke. The region including Bokhara, Khiva and Turkestan proper was always infested with robbers and inhabited by wild tribes known as Scythae. The Indians, Bactrians, Parthians and Scythians served as middlemen upto the Caspian sea. They handed over the goods to the Armenians and Caspian tribes, viz. the Albanians, the Iberians and the Colchians. (*Ency. Brit.* sv, Caspian sea). Wares were also sent up the Araxes

54 11. 5. 8.; XI. 7. 3. ; II. 1. 15.
55 Pliny, VI. 52.
56 Warmington, pp. 26-27. Cf. Strabo XI. 2. 17.
57 W. W. Tarn - *Jour, Hellen. Stud.*, XXI. pp. 18-28.
58 Strabo, XI. 2. 14-19.
59 Pliny, II. 170; Pompo. Mela, III. 5. 45.
60 J.R.A.S., 1904. pp. 309-312.

to Artaxata in Armenia and then distributed to all parts of Asia Minor. Another route was the land-route along the north-west coast of the Caspian sea upto the north-east of the Euxine, where the Siraces passed the goods from the hands of the Aorsi over to the Greek cities of Chersonese and to the marts of the Tanais or on the Don river. Besides, the Khazars, and the Barsileens with their capital on the Volga (Rha) were the main carriers of transit-trade between the Caspian and the Euxine basins.[61]

(ii) *ROUTES OF INDIA*

Now we should indicate here the chief routes in India. Przyluski[62] says, "from Maurya times onwards Pāṭaliputra was connected with Gandhāra by an imperial highway, drawn on the model of great roads of the Achaemenids. It played a great part in the political and economic life of India. After the foundation of the Greek kingdom of Bactriana commercial intercourse became very active between the valleys of the Ganges and the Oxus..... From Pāṭaliputra three great roads radiated to the frontiers of the empire—the south western to Barygaza by Kauśāmbī and Ujjaynī, the northern to Nepal by Vaiśālī and Śrāvastī, and the north-western, the longest, to Bactriana by Mathurā and upper valley of the Indus."

The Greeks tell us of the Royal road running from the N. W. frontier to Pāṭaliputra, the Grand Trunk Road of ancient India, about 1,300 miles in length.[63] In the third century before Christ the Maurya empire formed a part and parcel of a big international family with Syria, Egypt, Cyrene,

61 Strabo, XI. 7.3.; 1-4. 6-7; Pliny, VI. 15 ff. Cf. It is interesting to note that Bactria received gold from Siberia. Some specimens of jewellery found in Siberia and S. Russia are believed to have been made by Graeco-Iranian artists. Hence we may assume that they had been made in Bactria and imported into Siberia or S. Russia by the routes around the Caspian sea, noted above. Rostow, Vol. I. Ch. IV. p. 546.

62 La Legende de l'empereur Asoka, p. 9.

63 Strabo, XV. 1. 11.

Macedonia and Epirus, cultivating diplomatic relations and sending missionaries to preach the law of piety.[64] Centuries of international trade resulted in the construction of a high-way for this political and religious intercourse. The influx of foreigners in the big city like Palibothra was so high that Megasthenes records that a municipal board was set up for the proper care of the foreigners. "Among the Indian officers are appointed even for foreigners; whose duty is to see that no foreigner is wronged."[65] The Royal road was built by the Mauryas across North India along the Ganges. It was marked with signboards, noting turnings and distances at intervals of 10 stadia.[66] Strabo refers to the appointment of the magistrate to superintend the public roads and to keep them in good repair. The Royal roads began with Peucelaotis (Pushkalāvatī, now Charsadda), reached by the Kabul valley and went across the Indus, through Taxila, across the Hydas pes (Jhelum), the Hyphasis (Beas), the Hesydros (Sutlej) and the Iomanens (Jamunā) and through Hastināpura to the Ganges and continued through Calinapaxa (Kanauj ?), Prayāga to Palibothra (Patna).[67] Roads from Patala in Sind and from Barygaza met at Ozene (Ujjain) and joined the Royal Road at Modura (Mathurā), (cf. Peri. 48), by which were "brought down all things needed for the welfare of the country about Barygaza and many things for the Greek trade: agate, carnelian, Indian muslins, and mallow cloth and which was used for export of spikenard coming from Poclais.

It may be noted that Megasthenes refers to the Royal Road from Pāṭaliputra to the N. W. frontier as the road existing in earlier times. The same Royal Road must have continued its existence even in the period of our discussion, in as much as the classical authors like Strabo and Pliny

64 Rock Edicts., II. & XIII.
65 Megasthenes and Arrian. ed-McCrindle, p. 42.
66 Strabo, XV. 1. 11-12.
67 McCrindle, Ptol. 272-8; Rawlinson - *Intercourse bet. India & W. World*, p. 42, 64-5.

mention its use in their accounts. The *Lalitavistara* (Ch. 24) of the first century A.D. speaks of Trapusa and Bhallika, two merchant travellers of the Uttarāpatha ('Uttarāpathakau)[68] who journeyed from South India ('Dakṣiṇāpathāt') to north India ('Uttarāpatham') with 5 carts loaded with merchandise. This shows the connection of the G. T. Road of N. India with the S. India by roads, which will be made clearer later on. The term, 'Pubbanta Aparantaṃ' (from east to west), used so frequently in the Pali literature, evidently refers to the existence of the G. T. Road in the period of the Jātakas. Pliny[69] has noted the different stages and distances of the Royal road. The road from Poclais proceeded through the Pamirs to Bactria. This route linking India with central or western Asia by way of Taxila was also frequently used, free from dangers, as we read of students travelling in numbers to Taxila, unattended and unarmed for education in the *Jātaka*, ii, 277. The Periplus[70] mentions Indo-China trade-relation through this route, "From Thinae raw silk, silk-yarn and silk-cloth are brought on foot through Bactria to Barygaza."

Pāṇini also mentions Uttarāpatha,[71] trodden by travellers and carrying merchandise. This Uttarāpatha may be identi-

68 The Uttarāpatha, according to the Kāvyamimāṃsā is the region lying on the other side of the Pṛthūdaka or Peoha in the district of Thāneswar. ("Pṛthūdakāt parataḥ Uttarāpathaḥ.") Earlier writers also indicate that the Uttarāpatha region lay on the other side of the river Sarasvatī.

69 (a) From Peukelaotis —i) to Taxila, 60 miles; ii) to the Hydaspas, 120 miles; and iii) to the Hyphasis, 390 miles.
(b) From the Hyphasis to the Hesidrus 168 miles; from the Hesidrus to the Yumna 168 miles; from the Yumna to the Ganges 112 miles and from the Ganges to Rhodopha 119 miles. St. Martin states —" From Rhodopha to Callinapaxa - 167 miles.
(c) From Kanauj to Prayāg, from Prayāg to Pāṭaliputra and thence to the mouth of the Ganges. Cf. Rawlinson, Cf. Ind. & the Roman Empire. pp. 64-65.

70 Peri. 64.

71 Pāṇ. V. 1. 77.

fied with one or two natural approaches to India, as already mentioned; that is, either the Balkh-Kabul-Taxila route or the route from Herat to Kandahar and to Kabul along the Helmund valley. It may be pointed out that Chandragupta Maurya conquered these regions and thus extended his empire upto the borders of Iran and as a result, gave much stimulus to trade with the west through these routes. Within India this Uttarāpatha must have linked up her important cities, viz. Puṣkalāvatī, Takṣaśilā, śākala, Hastināpura, Kauśāmbi, Kaśī and Pāṭaliputra, mentioned in the works of Pāṇini and Patañjali.

Patañjali (commenting on Pāṇini, II.2. 18 and III. 3, 136) mentions two terms, "Niṣ-Kauśāmbīḥ", and "Nir-Vārāṇasīḥ" which mean "those (travellers) who have passed beyond Kauśāmbi and Vārāṇasī; and which indicate the connection of the G. T. Road with these cities. While commenting on Pāṇinī's rule III, 3, 136, Patañjali mentions two cities of Sāketa and Pāṭaliputra as lying on the same road and leads us to infer the connection of the G. T. Road with those cities also. It is curious to note in this connection that the Kāśikāvṛtti mentions Kauśāmbī as the starting point of the journey instead of Sāketa as mentioned by Patañjali; though both of them place Pāṭaliputra as the other end of the journey.

This G. T. Road of India was connected with many branch routes running north, south and also south-west lying on both sides of the river Ganges or Yamunā. The Nepal route linking India with Nepal and Tibet and the Assam route connecting India with China and South-East Asia branched off from this main road northward and they will be discussed in detail later on. The *Jātakas* refer to the inland routes by which inland trade was carried on by carts and caravans. The *Jātaka*[73] speaks of Anāthapiṇḍaka's caravans going south-east from Sāvatthi to Rājagaha and return-

72 Jāt, 1. 92. 348.

ing (about 300 miles) and going to the borders, not unlikely towards Gandhāra.[73] This route must have run along the foot of the mountains upto Kuśīnāra only to avoid difficulties in crossing rivers and there were twelve halting stations (gāmas or naṇgaras) including Veśālī between Kuśīnāra and Rājagaha. This route crossed the Ganges only once at Pāṭaliputta).[74] Pāṭaliputta seems to have been originally a small village, as testified to by the Lord Buddha[75] himself. The celebrated Viśākhā journeyed from Champā to Śrāvastī by boat.[76] Benares had a brisk trade with Ujjain passing through Kośāmbī and the Ceti country,[77] and this route cut the great 'North to South-west' road from Sāvatthi to Patiṭṭhāna.[78] From Kośāmbī branched off a road to Rājagaha.[79] From Mathurā on the Yamunā lay a way westward overland to Sindh, whence came large imports in horses and asses ;[80] and to Sovira. We know from the Periplus[81] that Mathurā was connected with another route via Ozene with Barygaza, from which again, there was another way to Māhīssatī along the Narmadā.

It has already been noted that Taxila was connected with Barbaricum or Patala at the mouth of the Indus by a road running almost parallel to the river Indus. It may be noted that Rudradāman conquered the Sindhu-Sauvira region and brought under his control the two great caravan routes running parallel to the Indus on both sides. McCrindle, from a study of Ptolemy's Geographika, points out:—"Ptolemy distributes into six groups the names of 41 places which he

73 Jat i, 377 f.
74 Dīgha, Nik. II. Suttänta, XVI. 81 ff.
75 " " II. 86.
76 Tibetan tales, pp. 115-6.
77 Jat. II. p. 248 ff ; I. pp. 253-4. ("Tadā vārāṇasi-vāsino vāṇijā vaṇijjāya Ujjenim gantvā ... chardakaṃ samharitvā bahum mālāgandhavilepanañ cha khajjabhojjādīni cadāya" .... etc.).
78 Sutta Nipāta. verses 1011-3.
79 Mahāvagga, VIII. 1. 27.
80 Jāt, I. pp. 124, 178 & 181 ; II. pp. 31 & 287; V. pp. 259-265.
81 Sec., 48.

specifies as belonging to the Indus valley and its neighbourhood. The towns of the second group indicate by their relative positions that they were successive stages on the great caravan route which ran parallel to the western bank of the river all the way from the Kophes junction downward to the coast. The towns of the fourth group were in like manner successive stages on another caravan route, which on the eastern side of the river traversed the country from the great confluence with the combined rivers of the Punjab downward to the delta. The third group consists of 2 towns —(Patala and Barberi) which were the chief marts of the commerce in the Delta" [82] and where the two routes evidently met. The road along the Indus from Taxila to Patala was, again, connected with routes of Iran at both ends, i.e., with the Makran route in the South and with the Herat-Kandahar route in the north.

Now let us trace the route[83] by which the Pāṇḍavas went to different places of pilgrimage. They came first to the Naimiṣa forest on the bank of the Gomatī (Vanaparva, Ch. 95. verses 1-2). Then they bathed in the Bāhudā river (Ibid. v. 4) and proceeded to Prayāga (v. 5). Thence they went to the holy hill of Gayā (v. 10) with its Brahma-saras (v. 11) and Akshayyavaṭa (v. 14). Next they went to the āśrama of Agastya (Ch. 96. 1). From there they went to the Nandā and Aparanandā rivers (Ch. 110.1) and then to Kausikī (v. 20) with the hermitage of Viśvāmitra. Afterwards they went to the Vaitaraṇī river in the Kaliṅgas (Ch. 114. 4) along the sea-coast. Hereafter the Pāṇḍavas went to various tīrthas along the sea-coast and reached the Pāṇḍya or Drāviḍa country. From thence they came to Śūrpāraka (Ch. 118. v. 8) which was a long distance from the Pāṇḍya country on the S. E. coast.

82 McCrindle, pp. 140-1.

83 The references to this route are taken from the Mahābhārata, ed. Pratap Ch. Roy, Calcutta, 1809 śak.

Then they went to the Payoṣṇī river in the Vidarbha country (Ch. 120. 31), from there they went to the Narmadā and Vaidūrya hill on or near its bank. (Ch. 121. 19). From there they went to the Saindhavāraṇya, the Puṣkara lake and the Ārchīka mountain. (Ch. 125. 13 & 16). Next they went to the Yamunā (125. 25) and famous tīrthas on its bank viz. Yugandhara, Achyutasthala (129. 9) and Bhūtalavya, door to Kurukṣetra (v. 11), the Plakṣāvataraṇa (v. 13) and then Sarasvatī and Kurukṣetra. Then they visited the Chamasodbhava tīrtha (Ch. 130. 5), the Sindhutīrtha, Viṣnupada (v. 8), the Bipāsā river, Kāshmīra (v. 10), the Vitastā (20), Jalā and Upajalā rivers (v. 21), the Kanakhala mountain and the Ganges. Thence they went to the Maināka (Ch. 139. 1), and Sveta mountains, the sevenfold mountains, the Kalaśaila; the Mandara, the Gandhamādana (Ch. 140-145) and the Kailāsa.

The route implies a round tour starting from North India through the east and west coasts of the Deccan and ending in the Himalayas. Though it was meant for pilgrims, it might have been in certain quarters used also by traders in the days of the epic.

Manu (VII. 185) speaks of three kinds of roads and these roads, according to Medhātithi, Govindarāja and Kullūka, passed through "the open country, the marshy ground or through a forest."

The Milindapanho[84] speaks of the fashion of the day how the architect of city would proceed to build a city with junctions, crossways, with cleanly and even high roads and with regular lines of open shops.' It shows the importance attached to roads in the economic life of the land.

Kauṭilya[85] mentions different classes of roads in the country such as:—

1. (a) Rājamārga or the king's way, highway.
   (b) The provincial roads connecting different parts of a province with its administrative head-quarter.

84 Milinda, V. 4.
85 Kauṭ, II. 4.

(c) Roads leading to Dróṇamukha.
(d) Chariot roads.
(e) Roads leading to pasture grounds.

These first five must be 24 feet in width.

2. Roads leading to Sayònīya (?), military stations (Vyūha), burial or cremation grounds and to villages — each 8 dandas in width.
3. Roads to gardens, groves and forests shall be 4 daṇḍas.
4. Roads leading to elephant-forests shall be 2 daṇḍas.

It may be noted that Sayónīya or saṃyānīya-Patha led to market-towns. ("Saṃyānīyaṃ Kraya-Vikraya-Vyavahāra-pradhānaṃ paṭṭanaṃ tatpathaḥ") Kālidāsa also refers to market-roads (Āpaṇa-mārga, *Kumār.* vii. 55) and mentions highways decorated with big shops on both sides. ("ṛddhāpaṇam rājapathaṃ"-*Raghu,* xiv. 30). Besides, we hear of paths from Kauṭilya, prescribed for each of elephants, chariots, and cattle, for smaller animals and for men. All these roads brought merchandise to the market from different places of their production in the country.

Kauṭilya also speaks of land-routes of India broadly divided into two— i) Haimavata or Uttarāpatha, i.e., the northern road leading to the Himalayas; and ii) Dakṣiṇāpatha. He says that the first route is held by some as the better, as this brings more valuable things (Sāravattaraḥ), viz., elephants, horses, kastūrī or musk, ivory, skins, silver and gold.

Kauṭilya,[86] though a Northerner, speaks highly of Dakṣiṇāpatha. He says, "If the southern route does not lead to countries from which come blankets, skins or animals like horses, it brings in far more valuable products like conchshells, diamonds, pearls and gold. The southern route, however, leads through many mines (bahukhaniḥ) and lands yielding valuable things (sārapaṇyaḥ) and does not mean risky or difficult travelling ("prasiddhagatiḥ alpavyāyāmaḥ").

86 Kau. Bk. VII. Ch. XII. 300.

We hear of an important route leading south-west from Sāvatthi to Patiṭṭhāna (Paithan) with six intermediate halts[87] and with frequent river crossings. The author of the Periplus mentions among the market towns of Dachinabades, two of special importance; Paethana, about 20 miles' journey south from Barygaza; beyond which about 10 days' journey east, there was another very great city, Tagara[88]." The Sātavāhana kingdom was joined to the north and west by two ancient paths, one starting from Masulipatam and the other from Vinukonda, meeting near Hyderabad (not that in Sind) and continuing through Ter, Paithan, Daulatabad, Chandore, Markinda, to Kalyāna and by a difficult way over the Western Ghats to Broach.[89] The route from Tagara and from Paithan to Barygaza ran through great tracts, without roads.

In great contrast to the northern trade-routes, the routes of south India were very difficult to tread where caravans could hardly pass on with ease. The Periplus[90] records that "the inland country back from the coast towards the east comprises many desert regions (?) and great mountains and all kinds of wild beasts, tigers, serpents etc., as far as the Ganges." Fahien also notes that the roads in Dakṣiṇāpatha are dangerous, and hard to travel."[91]

The Mahābhārata gives the following account of the routes of Dakṣiṇāpatha:—

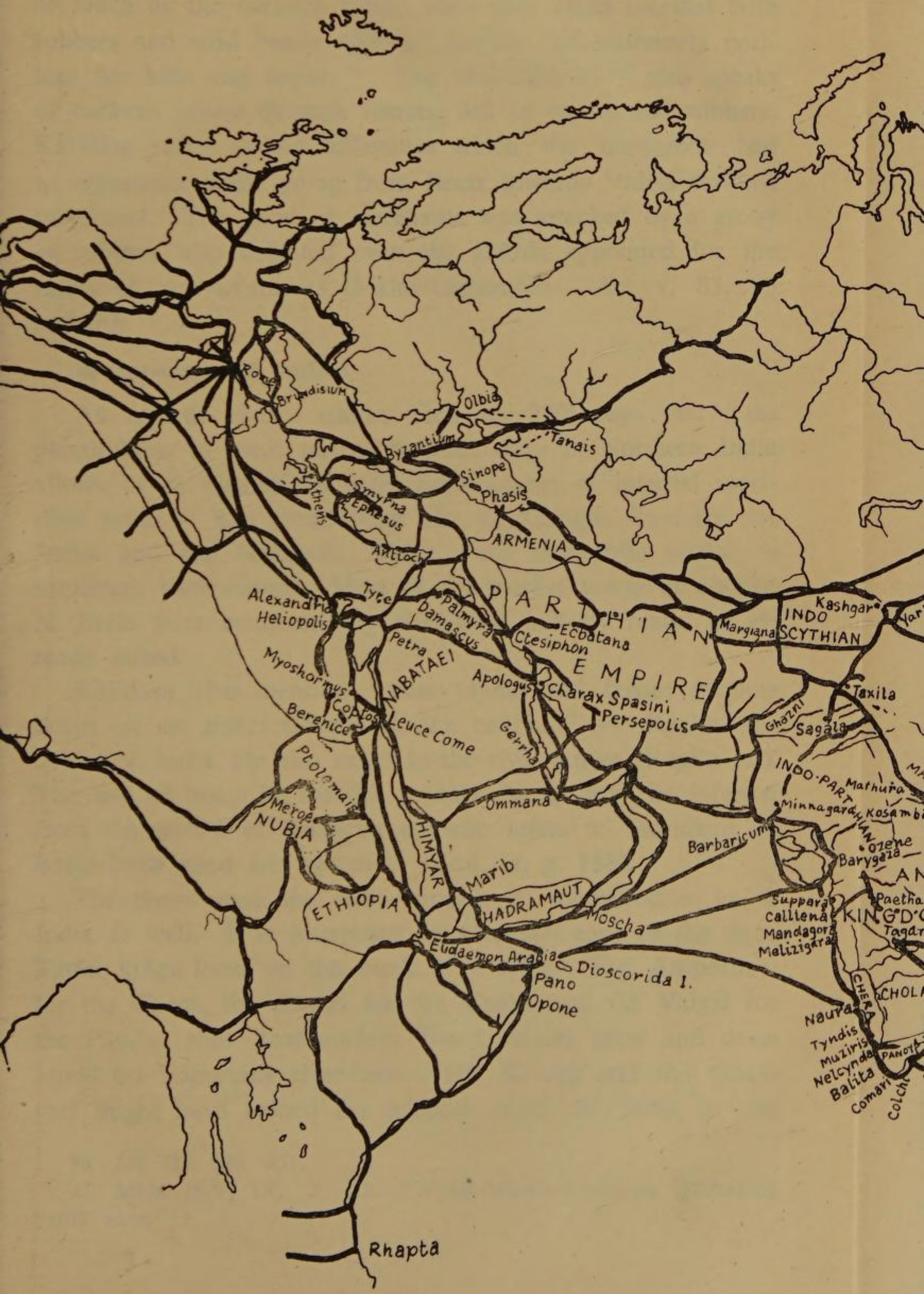
"Ete gachchhanti bahavaḥ panthāno Dakṣiṇāpathaṃ/Avaṇtīṃ Rikṣavantaṃ cha Samatikramya pavataṃ. Eṣa panthā Vidarbhānāṃ asau gachchhati Kośalān, Ataḥ paraścha deso'yam dakṣiṇe Dakṣiṇāpathaṃ.[92]

87 *Suttanipāta*—1011 - 13.
88 Peri. 51.
89 J.R.A.S., 1901, pp. 537-552; Peri, 51-2.
90 See. 50.
91 *A Record of the Buddhist countries by* Fahien, Peking. ed 1957. p. 75.
92 Mbh. III. 61. 218-23. ed Bhanarkar 1942 III 58. 20 & 22.

It may be noted in this connection that Veṅgipura in the Eastern Deccan was a great junction of routes running from different directions. Veṅgipura is mentioned in a large number of inscriptions. All the records of the Sālaṅkāyana kings are issued from Veṅgipura while one Hastivarman, king of Veṅgi is referred to in the Allahabad pillar inscription. The inscriptions of the Eastern Chalukyas mention Veṅgimaṇḍala, Veṅgirāṣtra, Veṅgimahi and the like. The Elura Copper Plate inscription of the Sālaṅkāyana Mahārāja Devavarman shows that by the first half of the fourth century A. D., the probable date of the record, Veṅgi was the head-quarter of a capital district and the Elura region was included in it. Veṅgipura may be identified with the modern villages of Peddavegi and Chinna vegi situated near lake Colair. Veṅgi was eminently suited to be the capital of the province for, as already stated above, it was a great meeting place of roads and 5 different routes converged at this place. Dr. Dubreuil[93] speaks of the following 5 roads which started from that place.—i) the road to Kaliṅga (N. E.), ii) the road to Drāviḍa (south), iii) the road to Karnatic (S. W.), iv) the road to Mahārāṣṭra (N. W.) and v) the road to Kośala (North).

Now let us enquire into the water-ways of India. Kauṭilya[94] contradicts the current view that water-route is preferable, as it is less costly and requires less labour, and opines that water-way does not help us in perils and it can not be used in all seasons and it is more risky. He classifies water-ways into two groups one along the coast and the other through mid-ocean. We may say that a river is a third water-way and less risky. A large part of internal trade was carried on by rivers. Boats plied for hire and sometimes ran express. Merchants preferred to sail from Benares down to Tāmalitti in spite of the existence of the caravan route;[95] in

93 *Buddhist remains in Andhra* Subrahmanian - Foreward. p. V.
94 Kau, VII. 12. 300.
95 Jāt, IV. 15-17.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Athens
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Heliopolis
Tyre
Palmyra
Damascus
PARTHIAN
EMPIRE
Ecbatana
Ctesiphon
Kashgar
INDO
SCYTHIAN
Margiana
Myoshormus
Coptos
Berenice
NABATAEI
Petra
Apologus
Charax Spasini
Persepolis
Leuce Come
Gerrha
Taxila
Ghazni
Sagala
INDO-PARTHIAN
Mathura
Minnagara
Kosambi
Ozene
Barygaza
Ptolemais
Meroe
NUBIA
Ommana
HIMYAR
Barbaricum
Marib
ETHIOPIA
HADRAMAUT
Moscha
Eudaemon Arabia
Dioscorida I.
Pano
Opone
Supparaca
Calliena
Mandagora
Melizigara
KINGD
Paetha
Tagar
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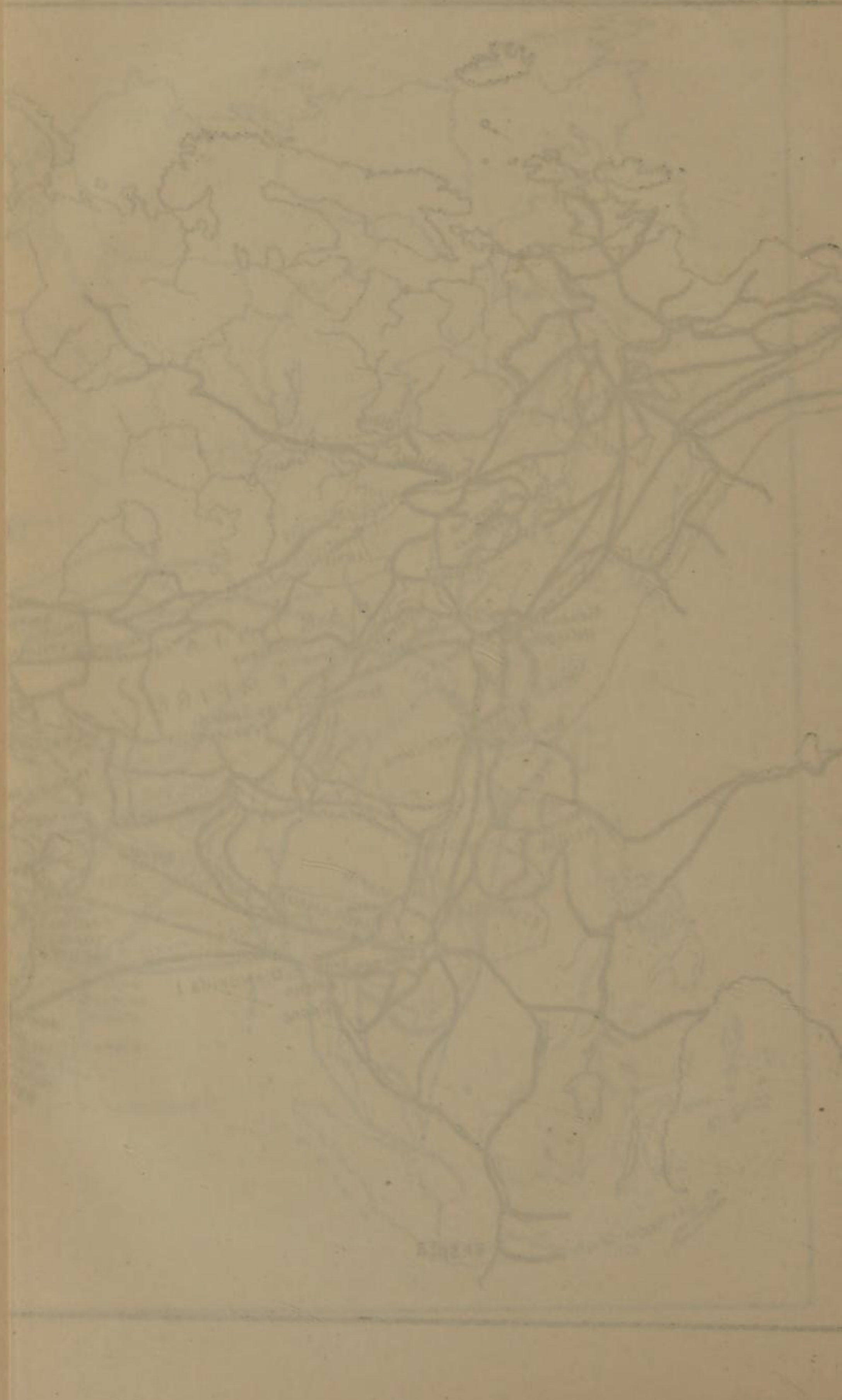
Naura
Tyndis
Muziris
Nelcynda
Balita
Comari
Colchi
PANDYA
Rhapta



as much as the caravan routes were very often infested with robbers and wild beasts and the journey was extremely perilous for hills and forests [96] The Mahābhāratā [97] also speaks of caravan routes through forests, full of beasts and robbers. Kālidāsa refers to the difficulties which the merchants had to experience while going from Berar towards Vidiśā through the forest. The band of merchants was attacked by a group of robbers who defeated even the guards appointed for the safety of caravaṇ-traders (Mālavikāgnimitra— Act v, 83, 85 and 90).

Water-ways of India:—

As regards river - traffic, Fick (p. 270) says that "the plentifulness of great navigable water-ways in Northern India allows us to assume an early development of internal maritime trade." The great rivers like the Ganges, Yamunā, the Indus and the Narmadā, which were navigable, served as important trade-routes. Most of the market towns of ancient N. India were connected by river-ways and by roads, as already stated.

Kālidāsa also mentions boats plying and ferries running down on the rivers ("Sarayūṃ cha naubhiḥ" — Raghu xiv. 30) of N. India. He also refers to the river-canoes (Raghu 1.2). The use of boats in the 7th century A. D. may be inferred from the record of Yuanchwang who refers to "accidents of boats from wind and waves". (Beal, II. p. 188).

The rivers were the main carriers of merchandise in S. India as well. It is interesting to note that each of the three Tamil kings lived on the bank of a river. The Ān-porunai for the Chera, the Kāverī for the Chola, and the Vaigai for the Pāṇḍya show that ancient Tamil culture grew and developed on important river-beds. The Kṛiṣṇā and the Godāvarī might have helped the internal trade of India in the

96 Jāt, III. 200. 403.

97 Mbh. (P.T) IX. 3. 13. "Vyāla-taskara-saṃkīrṇe Sāthahinā yathā vane."

period of our enquiry, as we find so many important towns and monasteries growing up in the valley of these rivers.

Coastal traffic:—

Coastal trade was also carried on between different sea-port towns themselves. The Jātakas mention ports like Sovira (III. 470), Bharukaccha (III. 126-7), Suppāraka (IV. 138-42), Kāverīpattana (IV. 238), Karumbiya (v. 75), Gambhīra (I. 239) and Seriva (I. 111). Pliny refers to the coastal voyage either from Barbaricum or subsequently from Sigerus near Broach for trade with the west. Indian shipping reached its climax during the beginning of the Christian era and connected herself not only by coastwise journey with her different ports on the west and east coast, but also by direct sea voyage with the rest of the commercial world.[98] Both the west and the east coasts of India were studded with ports and marts, as reflected in the Periplus and in Ptolemy's geography, each connected with the other by coastal voyage. The ports on the west coast like Barbaricum, Barygaza, Calliena and Muziris and Nelcynda might have been easily linked with one another by coastal voyage in the period of our enquiry. The ports on the east coast like Camara, Poduca and Sopatma were also, as the Periplus[99] states, enriched with "ships of the country coasting along the shore, as far as Damirica and other very large vessels, Sangara and Colandia which make for the Ganges." From the Chola ports country crafts sailed also upto Paralia (Malabar) on the west coast. Kālidāsa also refers to "the use of coastal rowing boats" for inland trade (Raghu--iv. 31 ; xiv. 30, xvi, 51, 68 and xvii. 81)

Ceylon is described in the Jātaka as the Nāgadvīpa, standing on the route from Bharukaccha to the East Indies. (III.

98 V. Smith says, "In the age of the Periplus the merchants of the country round Barygaza traded to Arabia for gums and incense, to the coast of Africa for gold and to Malabar and Ceylon for pepper and cinnamon and thus completed the navigation of the entire Indian ocean." (*Commerce of the Ancients*, Vol. II., p. 404).

99 Peri. 60.

188). The Divyāvadāna speaks of Siṃhala, son of an Indian merchant who went to Ceylon for trade. Though the Ceylonese chronicles ascribe to Vijaya, the prince of Bengal (?) the full credit, the Jātakas speak highly of the part played by the Indian merchants in the colonisation of Ceylon. Pearls and gems, muslins and tortoiseshells are mentioned in the Periplus (61) as the products of Ceylon. The Mahābhārata[100] also speaks of beryls, pearls and coverlets for elephants ('kuthān'), presented by Siṁhalas. The Mahāniddesa also mentions Tāmbapaṇṇi (Ceylon) as one of the naval stations. Hence we may assume that Indian ships frequented Ceylon[101] for trade. A ship sailing from the coast of Madura to Chāvakam (Java) touched at Maṇipallavam.[102] "Sea-faring merchants of Sumatra are represented as going by boat from Champā to Pihunda[103] in the days of Mahāvira, the Jina'.[104] Fahien reports that "merchants of different countries came to Ceylon to trade. At the time of traffic, the demons exposed their valuable commodities with the value affixed. Then the merchantmen, according to the prices marked, purchased the goods and took them away", (Beal. I. lxxii.)

Connection between North and South India by sea.

We may say that there was a commercial intercourse by sea, as by land shown before, between N. and S. India, as

100 Mbh, II. 52. 36. (P. T.)

101 Kautilya refers to pearls of Ceylon. Cosmas also records that "from all parts of India, Persia and Ethiopia came a multitude of ships to this island ..... and it sends ships likewise in all directions." Dr. R. C. Majumdar also shows how Ceylon was spiritually more closely connected with North India (Indo-Asian Culture, 1952, Vol. I. No.1). Prof. B. M. Barua points out that "the long connection between India and Ceylon is not only cultural but also commercial and industrial. (Ceylon lectures, p. 4).

102 Maṇimekalai,-XIV. 74-81.

103 Levi identified Pithunda with Pihunda of the Uttarādhyāyana and with "Pitundra Metropolis", mentioned by Ptolemy in the interior of the country of Masulipatam (Maisoloi). Indian Antiquary, 1926, 145.

104 Cf. Mbh. I. 65. 67, 186; VII. 50.; P.H.A.I. p. 420 n

the Periplus records that silk-goods of China were exported "to Damirica by way of the river Ganges,"[105] implying thereby the use of the coastal route from the mouth of the Ganges to Damirica. Gange was certainly the main outlet of merchandise of North India for the countries of the South and also of the West and the East.

The Śilappadikāram also speaks of the Vaiśyas of South India, who carried on trade both by land and sea with North India. It describes "the great deity of the illustrious Vaiśyabūtam, bearing in his hands the ploughshare and the balance. He would favour (the people) with abundance of produce. He would sell to those who needed rare articles, brought from mountains and seas."[106] The same epic speaks of "20,000 carts laden with different kinds of merchandise from the northern country unknown to other places .... having arrived at the gate"[107] of Kāveripaddinam.

Overseas trade:—

The study of ports on both coasts of India in the subsequent chapter III, will make it clear how India carried on overseas trade with the outside world. The bas relief at Barhut (PL xxxiv. 2; Schene No. 85), ascribed to the 2nd Cent. B. C., shows two boats on a rough sea, each containing three men", pulled by oars. Here we see how instead of the sailing ship even the boats with oars were used on the rough sea. (Barhut--BK I, p. 63, Barua). The Milindapañha (359) and the Mahāniddesa also record the naval stations, visited by the sea-farers (Infra p. 97) and speak unmistakably of overseas trade in ancient India. The Milindapañho[108] lets us know, by way of similes, the different functions of ships, made of timber, of anchor, of mast, of a pilot and of a sailor in the midst of a wide ocean with thundering waves and whirlpools. Hence we may assume that India had already im-

105 Peri. 64.

106 Śilappadikāram, BK XXII. 62-88, ed. V. R. Ramachandra Dikshitar, p. 257-8.

107 Śila. Bk. XXVI. 125-140, ed. Dikshitar, p. 298.

108 Milinda, Ch. VII. 2. 8-20.

proved her technical knowledge in sailing in the open ocean even before the Christian era. Gautama meeting with overseas merchants, is referred to in the Śāntipārvan. (12. 169. 2,- P. T.).

The Śakas were the masters of the Western ports of Bhārukaccha and Sarpāraga (Sūrpāraka). They built quadrangular resthouses (Chatuśśālāvasavapratiśrayapradena).[109] It may be noted in this connection that the coins of Yajñaśrīśātakarṇi bear the stamp of ships, "full-rigged for distant seas." It shows that the Sātavāhanas must have had a vigorous commercial policy. The Kānheri caves executed in their period exhibit sculptural representations of voyages through sea.

The art of shipping, though well developed was not entirely free from dangers. (cf. Maduraikkāñji II. 377-9). The bas-relief at Barhut,—Schene No. 85 shows how one "Vasugupta is brought ashore being rescued from the grip of Timiṅgila'. ("Tiram (h)i timigila-kuchimha Vasugupo mochito Mahādevānaṁ"). (Barhut, I. p.63 by Barua). We hear of dangers attending sea-voyages, arising from 1) the whales and tortoises, 2) from the waves and tides, 3) from running aground, 4) from sinking in water. 5) from being struck on marine rocks, 6)) from monsoons and 7) from the pirates. (Divyāvadāna-p. 229). Prof. Barua mentions the different means of escape viz, Satyakriyā i.e., the exercise of the power of truthfulness, taking the name of the supreme deity, performance of meritorious acts, faith in God, the intervention of Manimekhala and some such deities and the exercise of one's own intelligence, skill etc (Ibid p. 63). The Jātaka[110] shows how ship-wrecked persons were rescued by magic ships of gigantic size (8 uṣabha x 4 uṣabha x 20 yatthika) with three masts and ornamented with gold, silver and sapphire. This shows India's trade-relation through mid-ocean (cf. also Mbh. 12. 298. 28 ; Śaly. 3. 5.-ed P.T.). The cases of ship-wreck on the shores of Egypt and Germany

109 Nasik Cave. Ins., 10. IV.

110 Jāt, IV. 15 ff ; ("Sa dīghato aṭṭhausabhā ahosi, vitthārato catusabha, gambhīrato visatiyatthikā" . .), VI. 35.

may also be alluded to here. Hultzsch notes one Sophen (Subhānu), a Hindu traveller in Egypt.[111] But his view on the use of the Kanarese words in the Oxyrhynchus Papyrus of the 2nd cent. A.D. has been refuted by Barnett.[112] O Stein opines that the so-called Kanarese words are at least in part Greek words intentionally distorted to create the impression of Kanarese ones.[113] Some Indians "on a trade voyage" are also noted by Pliny (II. 170) and Pompinius Mela (III. 5. 45) to have been "carried off their course by storms to Germany" and they are reported to have been presented to Metellus Celer, Pro-Consul of Gaul in 60-59 B.C. But Lassen suggests that the ship-wrecked Indians who were living as slaves among the Suevi or the Boil were, perhaps, victims of the Caspian storm.[114] Fā-hien reports how his ship, ("a great merchant-vessel") on way from Ceylon to Java, sprang a leak and how it was saved at last by casting heavy goods and merchandise. (Beal, I, lxxx). He gives us a vivid picture of the over-seas traffic and his bitterest experiences in the wide ocean, infested by pirates and sea-monsters.

(iii)

ROUTES BETWEEN INDIA AND CHINA

While India was united under the Mauryas in the 3rd century B.C., China was still a hot bed of feuds among feudal chiefs. About 202 B.C. China was united with the rise of the Han dynasty. In order to check the Huns, the Han emperor planned to make alliance with the border people, the Sogdians, the Tokharians, the Yue-ches and others. The expedition of Chang' Kien beginning in 138 B.C., though not successful, opened up a new route from China to the Western world. His report of the border countries on the West and specially of the sale of bamboo and cotton-stuff in Ta-hia is

111 *J.R.A.S*, 1904, p. 402. Cf. Supra, p. 7 n 13.
112 *Journal of Egyptian Archep*, Vol. XII, 1926. pp. 13-15.
113 *Indologica Pragensia*, I. pp. 41-42.
114 Cf. Warmington, p. 77; Cary and Warmington, - *Ancient Explorers*, p. 55.

undoubtedly most interesting for the curious readers of Chinese traffic, in as much as "these had been brought by Indian caravans through Northern India and Afghanistan."[115] The Huns were soon eliminated and for the safety and security of the road to China from the west, China stationed military garrisons in Central Asia. As a result, "traders from all directions began to pour into the Chinese empire."[116]

Chang Kien's report refers to India s trade with South-western China through Assam and Burma as early as the 2nd century B.C.. The Mahābhārata and Arthaśāstra refer to "Chīna," a Sanskrit name for Tsin.[117] We are told that "a golden statue of the Buddha was taken by a Chinese general in 121 B.C. from C. Asia."[118] In 2 B.C. Buddhist texts were first given over to China by the Yue-ches and in 65 A.D. arrived first the Buddhist missionaries, Dharmarakṣā and Kāśyapa Mātaṅga with a white horse laden with sacred texts and relics. A brisk trade brought India and China closer together from very early times and the routes of communication, though essentially trade-routes, gradually turned into Buddhist routes or routes of exchange of culture.

The main overland route between India or the West and China passed through Central Asia, known better as 'Ser-India.' This region is bounded on the north by the Tien-shan, on the south by the Kun-lun, on the east by the Nan-Shan and on the west by the Pamirs. The rivers of China owe their origin to the eastern ranges of the Kun-lun; the Kashgar Daria rises from the Tien-shan and the Yarkand Daria from the Pamirs. Many colonies grew up in these river-valleys. People of Kashmir and N. W. India started colonies in Khotan and Khasgar in the first two centuries A.D.

The routes from Taxila ran along the valley of the Kabul

115 Dr. P. C. Bagchi, - India and China, p. 6.
116 P. C. Bagchi, India and China, p. 6.
117 Jayaswal, however. thinks that Chīna mentioned in the Mbh. and As., refers to the Tsin tribe of Gilgit.
118 P. C. Bagchi, India and China, p. 7.

river, passed by Hidda and Nagarahāra (Jelalabad) and reached Bamiyan, a valley surrounded by snowy cliffs of the Hindukush. Then crossing the Hindukush this route reached Bactriana (modern Balkh) where converged almost all the great trade-routes of Central Asia.[119] Balkh was at the junction of two great highways of C. Asia to China, the Northern and the Southern. The Northern route passed through ancient Sogdiana,[120] crossed the Jaxartes, passed by Tashkend, went westwards through the passes of the Tien-shan and at last reached Uch-Turfan. the other, shorter, passed through the country of the Tokharians, near Badakshan and over the difficult passes of the Pamirs, reached the plain at Kashgar. Another and shorter route joined Kashgar with the upper valley of the Indus. It passed through the Gilgit[121] and the Yasin valleys upto Tashkurghan, where it joined the other route proceeding towards Kashgar."[122]

Three routes ran from Sogdiana to the source of the Oxus and the Jaxartes. The Southern route ascended the high valley of the Oxus through Badakshan, the central one ran straight to Kashgar by the high valleys of the Jaxartes; and the northern one went down a part of the middle valley of the Jaxartes and then turned to the east towards the Chinese Tartary.[123]

It is interesting to note the following facts in connection with the opening up of the routes to China. We know that the Kushāṇas took advantage of the weakness of the Parthian

119 Cf. *History of Ancient Geography* - By Bunbury. pp. 486-7.

120 "From Su-le (Kashgar) the road passing westward across the Tsung-ling mountains, goes on to Ta-wan, Kang-chu and the Yentsai country, the regions which were long ago identified with the ancient Sogdiana." (Khotan by Stein, p. 52).

121 Kalhāṇa's Rājataraṅgiṇī shows the mountain routes corresponding to mod. Gilgit Transport road, i.e., routes from the Volur lake to the valley of Gurez. A. Stein has shown the character and historical importance of the old watch stations or Gates of Kashmir in his "Memoir on the anc. geo. of Kashmir." fig. 40.

122 Bagchi, India and China, p. 13.

123 Ptolemy's Geography, ed. McCrindle. p. 12 n.

kingdom in N. W. India, entered into India and established a mighty empire extending from the Oxus valley to Benares in the east.[124] Kaṇiṣka extended his sway in Central Asia up to the borders of China, so that "a tributary state of China to the west of the Yellow river sent him the royal princess as hostages."[125] Panchao, the Chinese general, began by this time his campaigns westward and naturally came to clash with Kaṇiṣka. Levi's summary of the Chinese account of Panchao's campaigns may be quoted here:—"Panchao's victorious campaigns pursued for 30 years (73 - 102 A.D.) without interruption, at this very time restored sīyu (the west) to the empire and carried Chinese arms beyond the regions explored by Chang-kien, as far as the confines of the Graeco-Roman world. By 73 A.D. the king of Khotan had made his submission; several kings of that country followed his example, and gave their eldest sons as hostages for their fidelity. Kashgar, immediately after, returned to obedience. The two passes by which the way to the south debouches into India were in the hands of the Chinese..... The Yuechi had not renounced their previous supremacy without a struggle. In the year 90 the king of Yuechi sent an ambassador to demand a Chinese princess in marriage. Panchao, deeming the request insolent, stopped the ambassador and sent him back. The king of the Yue-chi raised an army of 70,000 horsemen under the orders of the viceroy Sie.... Sie was vanquished and the king of the Yue-chi did not fail to send every year the tribute imposed upon him."[126] The Yue-chi king, referred to here, appears to be no other than Kaniṣka who was evidently defeated by the Chinese general. Hence we see that Panchao established his supremacy over Central Asia and extended the Chinese power upto the Caspian sea.

124 The relationship bet. C. Asia and India became closer under the Kuṣhanas whose existence in Bhāratvarṣa is proved as early as 64 A. D. by the Panjtar record.

125 Watters, on yuan Chwang I. p. 124.

126 Indian Antiquary, 1903. p. 421-2.

Khotan and Kashgar submitted to the Chinese armies in 73 A.D. and the southern route was thrown open to commerce. With the submission of Kuche and Karachar in 94 A.D. commerce by the northern route was regularly carried on between east and west.[127] Of course, trade by this route was opened up only nominally, the savage people still being powerful there. Trade flourished by this route under the Roman emperor Marcus Aurelius. (169-180 A.D.).

Now let us trace the route from the Yellow river to Bactra. It started from Singanfu and went through Lanchowfu, Kanchow, Yumenhsien, Ansichow and Lopnor to Tsiemo. Before proceeding further, we should trace the ancient routes between the Lop tract south of the Tarim and Tun-huang, the westernmost outpost of China. A. Stein[128] points out two possible roads; one, the mountain-route, "longer but practicable throughout the year passed along the high barren slopes of the Kunlun range, i.e., the Altin-tāgh" and the other, the desert-route follows the line of depression between the Kuruk-tāgh in the north and the Altin-tāgh in the south. The desert route began winding round the Karakoshan marches and ran along the south of the salt-lake bed to reach the centre of the oasis of Tung-huang towards Eastern Turkestan. The northern route leading to Lou-lan was most probably first laid by the Chinese with a view to get an easy and direct access to the great northern string of oases. Stein came across "the White Dragon mounds" on this route, used to cart-traffic (p.554), which remained the main line of traffic from Tung-huang westwards during the first few centuries after Christ.

The Wei-lio tells us of three routes from Tung-huang to the western countries. Two routes of the south and the centre are said to have passed along the Āltin-tāgh slopes to

127 Warmington - Commerce, p. 87; Schoff— (ed. of. the Peri.)-P. 268.

128 Ser-India, Chap. XIV. p. 548.

Mirān and through the desert to Loulan respectively[129]; whereas the New route of the North is mentioned to have started from Yu-men-kuan, passed through Heng-keng avoiding the San-lung desert and reached Chushih at Kao-chang (Turfan) and then turning west, must have rejoined the central route at Chiu-tzu (Kucha). The former Han annals speak of this new route of the north— "During the period of Yuanshih (1-5 A.D.) was made a new route which, passing north of Wu-ch'uan, penetrated as far as the Yumen barrier." M. Chavannes thinks that this route was opened in 2 A.D. only to reduce the distance and to avoid the White Dragon mounds.

Stein also thinks that the complete reduction of Loulan in 77 B.C. was followed by the institution of a Chinese Protector-General in 60 B. C. only to control both the routes of the north and south (p. 730). It is interesting to note here that Stein found a valuable relic at the station Txva, of the ancient silk trade. The relic consists of two strips of fine silk, undyed (T XV. a. iii 57), with an inscription — "(ai) ṣṭasya paṭa giṣṭi ṣapariśa," which proves beyond doubt that between 61 B.C. and 9 A.D. traders using Indian language and script used to travel by this route across the Chinese Limes for the silk of the Seres.[130] The line of the Limes ceased to work by the middle of the 2nd cent. A. D., when of course, the Lou-lan route linking Tun-huang with China continued its use (p. 733). The house in the midst of the sand-buried ruins of Lop Nor, where a small bale of silk was found to be perfectly preserved, bears a clear testimony to the use of this route by traders of the period of our investigation.

At Tsiemo, again, the main route divided itself into two. One was the "Nanlu" or "Southern way" which followed south of the Tarim river to Khotan and Yarkand, thence over the

129 Ser-India, p. 705.
130 Ser India, pp. 701-703.

Pamirs and westward to the Oxus and Bactra. "The second route, the "Peilu" or "Northern way" followed the same course from Singanfu to Tsiemo and thence, north of the Tarim basin through Kuche and Aksu to Kashgar and over the tremendous heights of the Terek to the Jaxartes and Samarkand. From Samarkand the route ran south to Bactra, while another led south-west more directly to Merv." [131] "A branch of the Peilu led from Yumensien to Hami, Turfan and Karachar, meeting the above route at Kuche... Another variant led from "Turfan through the Tienshan to Urumtsi and Kuldja, thence by the Ili river and north of the mountains to Tashkend, Bokhara and Merv." [132]

Maes, a silk-merchant of Macedonia reports that "thence (from Bactria) the route passed through the mountainous country of the Comedi and through the territory of the Sacae to the 'Stone-tower,' the station of those merchants who traded with the Seres. Thence to the Casii (Kashgar) and through the country of the Thaguri, until after a seven-month's journey from the "stonetower," the merchants arrived at "Sera metropolis," the city called "Thinae" of the Periplus. The route from the Stone-tower of Sera was exposed to violent storms and hence the progress of the travellers would have been frequently interrupted.

This account of Maes is a clear proof of direct trade between Rome and China. His route followed nearly the same direction, as the Chinese Nan-lu, after leaving Bactra, crossing the Pamirs diagonally to Kashgar on the Peilu, but then turning south through Yarkand to Khotan and in passing "Thagura," took a more direct and southerly route than the Nan-lu itself, which it joined half way between Lopnor and the Bulunzir (the river of the Hiong-nu); east of which all three routes were identical as far as Singanfu. A. Stein identifies

131-132 The Periplus, ed. Schoff, p. 268. Cf. Richthofen, China, I. p. 460.

Tashkurghan with the Stone-tower of Ptolemy or of Marinus. His report on Taskurghan may be quoted here. "Taskurghan, the chief place of the mountain tract, known as Sarikol is undoubtedly a site of considerable antiquity. Its importance reaches back to the days when the traders from the classical west exchanged here their goods for the produce of ancient China.... Nature has marked the site as the most convenient place for trade exchange on an ancient and once important route connecting great portions of C. Asia with the far West and East. From Taskurghan the road lies open equally to Kashgar or Khotan and thus to both the great routes which lead from Turkistan into the interior of China. Here also the best two lines of communication across the Pamir converge. The Taghdumbash valley, giving direct access to the Upper Oxus, is met by the route which crosses by the Naiza-Tash pass into the Aksu valley and thence by the great Pamir leads down to Shignan and Badakhsan..... The ruined town rests on a great rocky crag and is backed by the river Sita (i.e., the Taghdumbash branch of the Yarkand river) on the east.[133]

It is interesting to review the geography of this region in the light of the evidences of the Mahābhārata and of Ptolemy. The Bhīṣmaparvaṇ (Ch. 13) speaks of Śākadvīpa, double the area of Jambudvīpa (India)— "Jaṃbudvīpapramāṇena dvigunaḥ" (verse 9) and bounded by the Kshīrod sea. The Śākadvīpa is reported to contain 7 mountains, full of gems ("maṇibhūsitāh"—v. 13), one of which is "Durgaśaila" of high importance (durgaśailo mahodayaḥ —V. 22) which is nothing but Taskurghan, the Stone-tower of Ptolemy; and another of which the hill-country, "Kaumuda (Jaladaḥ kumudoḍbhavaḥ varṣaḥ, V, 24), which is most probably the Mt. Comedi, inhabited by the Komedai, according to Ptolemy. The Great Epic speaks of a number of sacred rivers watering this region, one of which is the "Chakṣu-(Vaṅkṣu) -r-vardhanikā"

133 A. Stein, Sand-buried ruins of Khotan, pp. 67-68.

(V. 32) to represent the Oxus or Jaxartes river of Ptolemy. Thus the Śākadvīpa may be taken to be the Oxus-Jaxartes valley. Imaos of Ptolemy is the meridian chain which intersects the Kaukasos, demarcates between China and Turkestan and is now known as Bolor Tagh. The Comedai were the people of the hilly region east of Bactria and in this valley lay the caravan route from Bactra bound for Serika across Imaos or the Tsunglung. Stein points out that as a result of the researches of Yule and Rawlinson, the valley of the Comedi has been made possible to be identified with "the mountains which divide the Wakshab river and the Alpine tracts of Korategin from the course of the Oxus." [134]

The number of colonies planted by Indians on both the routes, north and south of the Tarim basin speak of the use of these routes from very early times. Kashgar, Yarkand, Khotan, Niya[135] and many others on the southern route contributed much to the trade and cultural relations between China and the western countries. Similarly Polukia, Kuci, Yenki (Karashar) and Kaochang (Turfan) along the northern route added to the exchange of trade and culture between China and India. Dr. Bagchi has shown the importance of Khotan and Kuci in this respect.[136] Stein looks upon the dreary route towards Khotan through the desert of Taklamakan as of a special historical interest. He remarks, "It was undoubtedly the ancient line that led from the Oxus region to Khotan and China. Yuanchwang who travelled here on his way back to China, has well described the route. Practically, nothing has changed here in respect of the methods and means of travel" (Khotan. p. 168). It is not unlikely

134 Khotan - p. 54.

135 "Smaller pieces of coloured rug found in the old site beyond the Niya river (given in the Plate LXXV.), their Svastikā-like pattern and the Stūpa-like ornament" show their origin in India and establish her trade-relation with India along this route.

Cf. Stein, Khotan, p. 334.

136 P. C. Bagchi, India and China, pp. 14-15.

that the caravans that once trod this sand, exchanged with China commercial commodities along with elements of culture from India in the period of our enquiry. Stein points out that whitejade is still an important product of Khotan and remarks that "jade is the produce that has made Khotan famous all over the east since ancient times.[137] Copper-coins found plentifully in the sands of Khotan, so many "bi-lingual pieces of the indigenous rulers showing Chinese characters as well as early Indian legends in Kharoṣṭhī struck about the commencement of our era" (Khotan. p. 24), show clearly the trade-relation between India and China along this route in the first few centuries of Christian era. Moreover, "the pieces of remarkably well finished lacquered ware and the bits of delicately woven silk fabrics and the seal of old Chinese porcelain," unearthed from the sands of Khotan show the closeness of commercial relationship of Khotan with China. Besides these, the discovery of an ivory-die of the peculiar shape still popular in India speaks of the use of the trade route between Khotan and India.[138]

Niya in between Khotan and Charchen is also an ancient place on the route to Lopnor and China. Its antiquity is proved by two inscribed wooden tablets unearthed from the site, which contained writing in the Kharoṣṭhī script of N. W. India, usually used in the period of Kushāna rule in India. Hence this route was definitely frequented by Indians in the period concerned.[139] We have references to old places like Kucha, Shen-shen and Sule and the description of two persons as "Ta-yue-chi," i.e., Indo-Scythians in the inscriptions on wood (Excavation of N. XV.)[140] which have been ascribed to C. 269 A.D.. The importance of Yarkand as a trade-centre is due to its position "at the point where the great routes from Khotan, Ladak and the Oxus are joined by

137 Stein. Khotan. p. 233.
138 " " pp. 385-86.
139 Cf. " ,, p. 322.
140 Stein. Khotan, p. 296 & p. 384.

those leading to Kashgar and the N.E. part of the Tarim basin. Hiarchan, the capital of the kingdom of Cascar, is a mart of much importance, both for the great concourse of merchants and for the variety of wares. At this capital, the caravan of Kabul merchants reaches its terminus and a new one is formed for the journey to Cathay."[141]

Besides these Central Asian routes, India was connected with China from very early times by a route through Assam, Upper Burma and Yunnam. The Periplus (64) also refers to this route when it records that "from Thinae raw silk, silk-yarn and silk cloth are exported to Damirica by way of the river Ganges." Dr. P. C. Bagchi speaks of the use of this route in the period concerned: "the Assam-Burma route started from Pāṭaliputra, passed by Champā, Kajaṅgala and Puṇḍravardhana and proceeded upto Kāmarūpa in Assam." From Assam the routes to Burma were three in early times, as now; one by the valley of the Brahmaputra upto the Patkoi range and then through its passes up to Upper Burma; the second through Manipur up to the Chindwin velley[142] and the third through Arakan up to the Irrawaddy valley. All these routes met near Bhamo and then proceeded to Yunnanfu i.e., Kunming, the chief city of South China."[143]

Let us now see the routes followed by the most important pilgrims from China to India. Fa-hien started from the city of Chang'an in Shensi in 400 A.D., crossed the Lung district and reached the country of Kien-kwei. Then the rains being over, he came to the country of Niu-tán, crossed the Yang-lu hills and reached Chang-yeh, a military station in Kan-suh. Chang-yeh was much disturbed and the roadways were not open. He pressed on to reach Tun-hwang where he stayed for more

141 Yule, Cathy, II, p. 563.

142 Gerini notes that "Hindu travellers arrived into the country by the Manipur route from Assam." Researches on Ptolemy's Geographike, p. 140.

143 Bagchi, India and China, p. 17.

than a month. Fahien and his associates, five in all, started again and Liho, the prefect of Tun-hwang provided them with means to cross the desert of Lop. They came to Shen-shen corresponding to Cherchen of Marco Polo, a Venetian traveller who noted that it was five days' journey from Lop to Cherchen. They stayed at Shen-shen for about a month and marched north-west for 15 days and reached the country of Wu-i, which seems to correspond to Karshar and is the same as the 'O'-Ki-ni of Yuan Chwang. Fa-hien obtained the protection of Kung-sün, an official of the Fu (family), remained there for 2 months and some days. After this Fahien journeyed to the south-west and on the road there were no dwellings or people. Probably they followed the course of the Tarim basin and of the Khotan rivers. The difficulties of the journeys and of crossing the rivers "exceeded powers of comparison". They were on the road for a month and 5 days and then they managed to reach Khotan. Khotan has been identified with Li-yul of the Tibetan writers. It is the land of the Lion-people. The polished condition of the people here and their religious zeal indicate close connection between India and Bactria.

Fa-hien stayed at Khotan for more than 3 months to see the car procession and then advanced for 25 days towards the country of Tseu-ho, (probably the Yarkand district) from which there was a caravan route south into the mountain region of Tsungling. It was by this road they pursued their journey for 4 days to Yu-hwui or Yu-fai where they had religious rest. They again marched for 25 days to Kie-sha-area in the centre of the Tsung-ling mountains and thence for about a month more to cross the Tsungling range and reach To-li, the valley of Daril on the western bank of the Indus. Next they advanced for 15 days south-west by the road, very difficult and broken with steep crags and precipices, crossed the Indus and entered the kingdom of Udyāna, the land of Buddhism. Then he came to Gandhāra (Kien-to-wei) after a journey of 5 days east and to Purusha-

pura (Peshwar) or Fo-lu-sha. He passed through Nagarahāra (Na-kie), crossed the Sin-tu river, and went along Kanauj (Ki-jou-i), Sha-chi, Kiu-sa-lo (Kosala) with its chief town she-wei (Śrāvastī) and arrived at Kapilāvastu. Next he went to Pāṭaliputra, Nalo, the place of Sāriputra's birth, Rājagṛha and Gayā. Fa-hien went along the Ganges to Kāśi (Beneras) and came back to Pāṭaliputra. Then he went to Chem-po (Champa) and reached Tāmralipti. Here he stayed for 2 years and then shipped himself on board a great merchant-vessel in a south-westerly direction for 14 days and at last reached Simhala (Ceylon).

We hear of Sung-Yun (518 A.D.) another pilgrim of Tun-hwang (little Tibet), who seems to have taken the southern route from Tun-hwang to Khotan and thence the same route as Fa-hien and his associates. Sung-yun started from the capital and passing through the Chīh-Ling (Barren Ridge), the country of the Tuh-Kieueh-hun (the Eastern Turks), the cities of Shen-Shen, Tso-moh and Han-Mo, and reached Khotan.

Now to consider the route of Yuan Chwang. He started from the land of Kao-chang, and went to Akini (Yen-ki). At present the city of Karashahr is generally taken to be the ancient capital of Yen-ki. The distance from Kao-chang to Yenki was 900 li, according to Ma T. II. C: Tung-chih-lio. The pilgrim "went from Yen-ki south-west above 200 li, crossed a hill and two large rivers west to a plain, and after travelling above 700 li from that, he came to the Kuchih country." From Kuchih "a journey of above 600 li" across a small desert brought him to the Poh-luh-kia country. Thence he went along a stony desert to the Ling-shan (ice-mountain).

The path was dangerous with cold winds blowing fiercely and with savage dragons molesting travellers. He met the great Tsing lake on the way, which is nothing but the Issyk-kul or Hot lake. From Issyik-kul going north-west he travelled above 500 li to the city of the Su-She water, inhabited by traders and Tartars from various districts. From the city he

passed through the region known as Su-li, inhabited equally by traders and farmers and after a journey of above 400 li westward, reached the "Thousand springs". Thence he continued his journey westward for about 150 li and reached the city of Ta-lo-ssu, where traders and Tartars lived pell-mell, and which has been identified with Aulie-ata on the river Taras by - Dr. Bretschneider and by Dr. Schuyler. He came across a deserted town and reached the Pai-shui-cheng or ""white water city", which should be better identified with the modern Mankent. Again he marched south-west for more than 200 li and got to the city of Kung-Yu. Next he came through the country of Nu-chih-kiu or Kan to the Che-shih country. Che-shih has been taken to be modern Tashkand. The word Tash means "stone" and Tashkand is the city of Tash, i.e., the stone-city. Ptolemy (about 150 A. D.) tells us of "stone-tower" on the road of the caravans between India and Serica; though other writers place the tower at the starting point of the caravans proceeding to the country of the Seres. Che-shi means a 'Stone-city' and never a 'Stone-tower'.

From Che-shi, the old Tashkand country the pilgrim went to Fei-han, identified with Ferghana. His personal visit to Ferghana is, however, controversial. From Fei-han, he came to the Su-tu-li-se-na country, which he describes as the country with the She (Jaxartes) river on its east. Then he came to Samokan, which has been taken to be "Samarkand" and which was, as he saw, a "great commercial entrepot', peopled with "Skillful craftsmen, smart and energetic". Next he came through Mimiha to the Kaputana country of unknown situation and then to Kusanika, supposed to stand midway between Samarkand and Bokhāra. After this came the Puhoh country, identified by Dr. Bretschneider with the modern Bokhāra, and the Fah-ti country to the west of the Oxus whence the pilgrim went to Huo-li-simika, most probably modern Khiva, and further to Ka-shuang-na or Kasanna, modern Kesh. Now he had to proceed south-west through a range of mountains, where "the path was a narrow risky

track." He entered the Iron Pass with a high precipitous mountain on its either side and reached the Tuholo country, definitely Tukhāra, with the Oxus flowing through the middle of it, from east to west. Here gold and silver are reported to have been used in commercial transactions. The pilgrim followed the course of the Oxus upto Ta-mi (Termed) and passed through a number of small states to reach at length the Huo (Kunduz) and the Hu-lin countries. From Huo he came to Fo-ho, identified with Balkh; very near its capital stood Te-wei's and Po-li's cities. The Te-wei and Po-li were names of men, definitely "travelling merchants or caravan-chiefs from a far land". Next he came to the Yue-mei country, from Balkh he went south to Ka-chih, "the valley of Gaz", and a journey of above 600 li brought the pilgrim into the Fan-yen-na country, identified with Bamian. From Bamian the pilgrim came to Kapishih, which, Cunningham says, must have included the whole of Kafiristan. At last he crossed the mountain (a black range) and entered Yin-tu (India). India was called in Chinese also as Tien-chu, Shentu and Sien-tou.

The countries which the pilgrim describes from Lam-po to Rajpur were not regarded as India proper but they were included by the foreigners under the general name India. From Kapiśa the pilgrim went east through the black range and entered the Lam-po country, just north of India, which represents Lambatai of Ptolemy and modern Laghman. From Lam-po, he came to Na-ki-lo-ho, modern 'Nagarahāra' (Jalālābād). (cf. Cunningham, A.G.I—p 51). Julien makes it stand for Nagarahāra. Thence he came to the Kan-to-lo (Ganghara) country, studded with more than 1000 Buddhist monasteries.

Next he crossed a large river and reached a city called (Pushkarāvatī, and he passed through Polusha and u-to-kia-han-ch'a cities to the city of P'o-lo-tu-lo, (Salātura) the birth-place of Pāṇini. He came to the Wu-chang-na country, which stands for udyāna and where the seat of government was

fixed in Mengkie, modern Manglaur. Thence he came to the Apololo spring, the source of the Swat river and passed through Talilo (modern Darel) and Polulo (modern Bolor) and reached Takshaśilā (Taxila). From Taxila, he went south-east across hills and valleys for above 700 li to the Sanghapulo (Siṃhapura) country. Cunningham (p. 144) identifies its capital with Ketas, "situated on the north side of the Salt Range." The pilgrim went back to the north confines of the Takshaśilā country, crossed the Indus and travelled south-east going over a great rocky pass and reached the Wu-la-shih country, i.e., Uraśa, which is identified by Cunningham with the "Varsa Regio" of Ptolemy and with the modern district of Rash in Dhantāwar" (p 119). Ptolemy places it in the Hazāra district. (cf. S. G. A. M. I. (Sircar), p. 26). From Urasa he travelled over mountains and along dangerous paths and across iron bridges to the country of Kashmir. From Kashmir he went through Punaeh to the Ho-lo-she-pu-lo (Rājapuri) country, identified by Cunningham with "the petty chiefship of Rājearī, to the south of Kashmir" (A. G. I., p. 129). From Rājapura the pilgrim passed through the Chehka country (Takka District), Chi-na-pòti (Chīnabhukti), She-lan-t'olo (Jālandhara), Kuluto (Kulu in the upper valley of the Biyās river, She-to-tu-lu, Po-li-ye-to-lo (Pāryātra) and reached Mo-t'u-lo (Mathurā).

From Mathurā the pilgrim proceeded north-east, and reached the Sata-ni-shi-fa-lo (Sthāneśvara) country, modern Thaneswar in Ambala. Thence he passed through the Sulukinna country (modern sugh), bounded on the east by the Ganges and with the Jumna flowing through it and reached the Ganges. Then he crossed to the east of the Ganges and came to the Motipulo (Matipura) country, identified by Cunningham with "Maḍāwar, a large town in western Rohilkhand near Bijnor" (A.G.I., p. 348-49).

Next he passed through the city of Móyulo (Mayūra), the Ganges-Gate (modern Hardwar), the Polohihmopulo country (Brahmapura), Kiu-pi-showny-na, (Kāśipur) identified by

Julien with Góvišana, 'o-hi-chi-ta-lo (Ahichatra), Piloshanna, identified by Cunningham with" the great ruined mound called Atrañjīkhera," which is situated on the right or west bank of the Kāli Nadi, four miles to the south of Karsāna and 8 miles to the north of Eyta on the G.T. road" (A.G.I., p. 419)[143a] and Kah-pi-ta (Kapitha) or Sankāśya, and reached Kanokusha (Kānyakubja), modern Kanouj. From Kanouj the pilgrim went to Navadevakula, modern Nohbatganj, (A.G.I., p. 438), then to Ayute (Ayodhyā), which is Shā-ki of Fa-hien and through Hayamukha reached Poloyaka (Prayāga) at the junction of the Ganges and the Jumna. From Prayāga he passed through a wild forest to Kiao-shang-mi (Kauśāmbī), identified by Cunningham with Kosam (A.G.I., p. 451). Then he went to Kaśapura and through Pi-sho-kia (Viśākha) to Shih-lo-fa-si-ti (Śrāvastī). Next the pilgrim passed through the Shi-to-lin wood (Jetavana) to the country of Kapilāvastu and then to Kuśinagara. From Kuśinagara he came to the country of P'o-lo-ni-sse (Varāṇasi) country, from Benares he passed through Chau-chu, Vaiśālī (mod. Basārh), Magadha, Gayā, Nālandā, and I-lan-na-po-fa-to, identified with Munghyr by Cunningham, Fergusson and St. Martin, to the Champā country (mod. Bhāgalpur). From Champā the pilgrim passed through Kie-chu-hoh-kilo (Kānkjol, now Rājmahal), (cf. A. G.I.-p. 548-9), Pun-na-fa-tan-na (Puṇḍravardhana), identified by Cunningham with Pabna (p. 550) but now with Mahāsthānam, the Bogra District (cf. S. G. A.M.I.—Dr. D. C. Sircar-p. 28) Kamolupo (Kāmrūp), San-mo-tacha (Samataṭa), once identified with the Delta of the Ganges, (A.G.I.—p. 576) —but now with the Tippera-Noakhali region of South-East Bengal (S.G.A.M.I., Sircar, p. 168) and Tan-mo-lipti (Tamluk) which was fifty yojanas according to Fahien and which was the place of disembarkation for travellers to India from China by sea and where I-tsing and other Chinese pilgrims landed, to Ka-

143a Ahicchatra has been identified with mod. Rāmnagar in the Bareily district . (Sircar-S. G. A. M. I., p. 92).

lo-na-su-fa-la-na-(Karṇasuvarṇa), now identified with the Murshidābad district (S.G.A. M.I., p. 98). Then the pilgrim went to Wu-tu with its chief city of Chelitalo (Charitra). Wu-tu is modern Orissa. Chāritrapura was near about mod. Pūrī. It may be noted that some inscriptions of Samadatta, Bhānudatta of the Datta dynasty in the Balassore-Cuttack region lead us to assume that the term "u-cha" (Uḍra) of Yuan chwang was applied to the Balassore-Cuttack-Puri region. (cf. S.G.A.M. I. —p. 145.) Next he went to Kong-yu-t'e, identified by Cunningham with Ganjam (p. 587., A. G. I.), and still accepted to be so. Then the pilgrim went to Kaliṅga, whose capital has been identified by Cunningham with Rājamahendrī on the Godāvarī (A. G. I., p. 591), and to Kośala (Southern), identified with districts of Raipur and Bilaspur in M. Pradesh (Cf. S.G.A.M.I.—p. 99) and to An-tolo (Andhra). After this the pilgrim went through Tena-ka-che-ka (Dhanakaṭaka), to Talopitu (Drāvīḍa) with Kāñchī-pura as the capital which served as a seaport of south India for Ceylon and to Malakūṭa.

From the Drāviḍa country the pilgrim went through Kung-Kan-na-pu-lo (Koṅkanāpura) to Mohalach'a (Mahārāshṭra). The way was through a great forest wilderness ravaged by wild beasts and banded robbers. Then he crossed the Nai-mo-te (Narbada) river and reached Polukachepo (Bharoch) or Bharu kaccha. Next he passed through Molapo (Mālava), Atali (unidentified), Kiecha, identified by Cunningham with Kheda, (Kaira), a large town of Gujarāt (p. 564), Falapi (Valabhī), Sulacha [Su-la-cha is the same as Sanskrit Sutrāṣṭra or Southern Kathiawar of which the capital was Girinagara (modern Junagaḍh). Some people have wrongly confused it with mod. Surat], (A.G.I.—p. 372), Ujjain, Sindh, Moulosanpulu (Multan), Pofato and Falana (Varaṇa) or Banu, identified with Pona of Fahien, and reached Tsaokuṭa corresponding with the Arachosia of Greek writers. Then he went through Fo-li-shi-sa T'ang-na (Parśusthāna), Andar-ab, Khost, Hwoh (formerly Tuh-ho-lo, sk. Tukhāra), Meng-kan (Mengan) which is "still

a province under Badakshan," Polihoh (Priha) and Pota-chang-na (Baḍakshān).

From Badakshan the pilgrim passed through Yin-po-kan (old Tokhāra), Ku-lang-na (modern Kurān), Iā-mo-si-tie-ti, north of the Hinḍu Kush, Shih-kini (modern Shaghan), Shang-mi identified with the Chitral District, the Po-milo (Pāmir) valley, Kie-pan-te, Wusha, Kie-sha (Kashgar) and Chekuka (modern Yarkand) to Kusatanna (Khotan.) The country of Khotan has been described as sand-dunes at least more than its half. From the Pimo valley he reached the Ni-jang city, situated in a great marsh. Going east of Ni-jang the pilgrim entered the great flowing sand. This desert had no tracks, many travellers went astray, on every side was a great vast space with nothing to go by; so travellers piled up bones of animals as marks. A journey of more than 400 li brought the pilgrim to "the old kingdom of Tu-ho-lo" and after further onward march, to Na-fa-po.

The return journey of the pilgrim from India to China may be summed as follows:—(from July, 644 to 645, April).

Yuan-chwang, after leaving Gazni (Hosina), the capital of the Tsao-kuta (or Jaguda) country, travelled in a northerly way and reached Kabul. A short journey eastward brought him to the frontiers of Kapisa. He then walked a few miles to the north-east, turned north and crossed the Hindukush by the Khawak Pass. His next halt was at Andarab (Antalopo); whence he advanced through Khost to Kunduz (Huo) which he had visited 14 years before. Then instead of taking the Northern or Samarkand road by which he had come, he plunged in the mountains, travelling almost eastward. He had to wait for a month for the opening of the passes at Badakshan. Proceeding along difficult and devious paths he traversed over many countries to reach Lake Victoria or Sarikul.

The pilgrim then made his way to the Wakhjir Pass, on the watershed of the Oxus and Yarkand rivers and proceeded

through the Taghdumbash Pamirs to Tashkurghan, capital of Sarikul. Passing along the western flank of the huge mountain named Mustagh-Ata and traversing a region called Osh (Wusa) he reached Kashgar.

From Kashgar the pilgrim followed the now wellknown road through Yarkand to Khotan, where he had to wait for the imperial permission to return to China. In due course the necessary orders were received and the pilgrim resumed his journey. Passing through the town of Pima (Bhima), probably the modern Uzun-tati he arrived at Niya (Nijang) on the eastern frontier of the Khotan Kingdom. He then entered the desert and came to Tukhāra which may be located at Andere. He next passed through the country of Chemotona, modern cherchem. From this point the Life gives full details of the route. It is clear that Yuan-chwang passed to the south of the Lake Lop-nor, as he is recorded to have crossed the Kingdom of Na-fa-po.

He must have proceeded by the road skirting the base of the Altyn Tagh Range, from which turning northward he reached Sha-chau (Sachu). Presumably he must have journeyed to the Yu-men barrier, through which he had made his escape when furtively quitting China 16 years before, and thence must have travelled by the ordinary road through Liang-chau to the Western capital Chang-an (Singan-fu) where he arrived at in April 645 A.D.

The account of Yuan chwang helps us to know the use of the route of the Eastern India to China. He records, "To the East of Kāmarūpa, the country is a series of hills and hillocks without any principal city and it reached to the south-west barbarians of china, hence the inhabitants were akin to the Man and the Lao". He mentions the distance between the South-West borders of Sse-chuan (Shuh) and Kāmarūpa to be a journey of two months and that is due to "the mountains, hard to pass, pestilential vapours and perilous snakes and herbs". It is curious to note that the song

of the victories of the Tsin king of the Mahāchīna country in 619 A.D. was widely circulated in Kāmarūpa, as referred to by Bhāskaravarman, the Kumār-rāja of Kāmarūpa, in C. 638 A.D. This leads us to assume that the song might have had its access by the shortest route from China to Assam. Dr. P. C. Bagchi also refers to "the route through Tibet, opened in the 7th Cent. A. D. when Srong-btsan-sgampo was converted to Buddhism and allied himself with China and Nepal by marrying a princess from each of the two countries". (India and China - p. 20). One Chinese pilgrim Hiuen Chao has also left us a record of his journey through Tibet in the last half of the 7th Cent. He left "the frontiers of China, crossed the desert, passed by the Iron gates (Darbend), traversed the country of Tuhola (Tokharestan), passed through the country of the Barbarians (Hu) and at last reached T'ufan (Tibet)". He secured through the Chinese queen of king Srong-btsan Sgampo a safe escort through Tibet upto Jālandhar in the Punjab by an unusual route. Bāṇa (Ed. Peterson, p. 136) also refers to the land route between India and China —"Pāṇḍava Savyasāchī Chīnaviṣayamatikramya ..... Hemakūṭaparvataṃ parājaiṣṭha" (Pāṇḍava passed through the territory of China to the Hemakūṭa mountain).

As regards sea-route to China, Pankou (C. 1st cent. A.D.) helps us with his "Tsien-han-chou," wherein he records that China had trade relations with South India as far back as the 2nd cent. B. C., if, of course, Ferrand is right in identifying Houang-che with Kāñchī (J. A. II. 13 & 14). Panko reports that the Chinese had to use the foreign ship for their transport and they bought "shining pearls, glass, rare stones and strange products, giving gold and silks in exchange." The sea-journey from the coast of Indo-China to Houang-che took about a year. Moreover, it is stated in the Wei-shu - "There is also a water road communicating with the I-chou and Yung-chang principalities (both in the present Yun-nan)"[144]

144 Ct. J. (19), Hirth, China and the Roman Orient, p. 50.

and, in the Wei-lio,' 'there is also a water road leading through to I-chou and Yung-chang."[145] The Wei-lio adds that "the curiosities of Ta-tsin come from Yung-chang." The route noted here leads us to "a sea-port on the coast of Pegu whence one of the two rivers, the Salwen or the Irrawaddy, offered a channel for traffic with the confines of Yunnan. Perhaps the South Eastern route along the bed of the river Taho .... saw lively traffic in those days, as it must have connected a considerable portion of the interior of China with the ports on the Gulf of Bengal."[146] Gerini also concludes that "though the communication was probably effected through some sea-port on the coast of Pegu, it no doubt took place also overland."[147]

Now let us discuss the bamboo path, referred to in the Mahāniddesa (7. Aṭṭhakavagga), used in passing through the mountainous regions of Central Asia.

We hear in "Saddharmasmṛtyupasthāna" of a river which reduces everything falling in it into stone then and there. On the two sides of this river the reeds called Kīchaka, being shaken by the wind get interlaced.[148]

The Rāmāyaṇa (IV. 44. 37-8) speaks of the river of stone water; "Taṃ tu deśam .... pratyānayanti cha" .... "Passing this place the river of stone water is found. There are the bamboos called Kīchaka on its two banks. It is a wild river and can not be crossed because if a man touches its water, he gets petrified. And these bamboos growing on its banks are in contact with each other and they carry the saints from one bank to the other." The Mahābhārata also mentions the stone-water river in "Śailodamabhito nadīṃ ... upāsate" (II.

145 Cf. p. (50). Ibid, p. 74
146 Hirth, China and the Roman Orient, p. 179.
147 Gerini, Researches on Ptolemy's Geo, p. 61.
148 J.A.. 1918, II, p. 54, "Pour L'HISTORIE DU RAMAYANA", M. S. Levi.

51. 1858.cal. ed.) - "Those who enjoy the pleasing shade of the bamboo near the river of stone-water."

McCrindle also refers to the same path. "They say .... that further to the north of the country of Seres there is an unknown land with marshy tanks in which grow big reeds which are so closely connected that people can go over to the opposite side by holding them. There is a road which not only proceeds to Bactria over a stone tower but also to India by Palimbothra." [149]

The "Śailoda", referred to above, as lying in the Himalayan regions is most probably the river of Khotan and the stones are nothing but the jade pebbles. Fa-hien also describes a dangerous crossing, while travelling through the Pamirs. He had experienced "many obstacles on the road, which is very hard to travel and many dangerous precipices. The crags rise sheer to a formidable height .... Below flows a river by the name of the Indus. ... The ancients crossed the river by a rope-suspension bridge". He might have meant by this bridge the path of bamboo.

The trade routes of India, as reflected in Kālidāsa may be briefly discussed here. He refers to both the routes by land and sea by which the merchants carried on trade to overflow the country with wealth. ("dhārāsaro" -Vik. IV. 13). His terms "mahāpatha" (Kumār VII. 3), "rājapatha" (Raghu XIV. 30) and "narendramārga" (Raghu IV. 67), indicate the continuance of great roads by land even in his period. We have clear references to at least three inland trade-routes by which Raghu marched south in course of his conquests (Raghu IV): Aja moved from Ayodhyā to Vidarbha (modern Berar), the land of the Bhojas (Raghu. V. 41 ff) and the cloud-messenger passed from the Rāmagiri hill (in Chitrakūṭa in south India) to Alakā (the Himalayas), besides that from Trikūṭa to Persia (Raghu. 4. 60). The route of the Digvijaya

149 Cf. McCrindle, Ptolemy's Geographyike. pp. 28 & 29-30.

of Raghu may be traced as starting from Ayodhyā and going along the Sarayū river to reach the Ganges and along the Ganges coming down to Bengal. Next Raghu turned to south, and reached Orissa (Mahendra hill). After this he passed through Kaliṅga, Aṅdhra and Drāviḍa to the extreme south of India. Then again he went along the western Ghats towards the north-west and reached Sindh where the route bifurcated into two, one by the sea and the other by land. Raghu, however, chose the later, passed through southern Beluchistan and met the Persians; and then advanced towards north and north-east through the Hindukush to reach Balkh. Then he went along the Pamir through Kāmboja to enter India. Next he traversed through the southern slopes of the Himalayas to come to Kāmarūpa. This military route, linked with other inland routes of India might have been used for trade and commerce.

The route of Aja's journey started from Ayodhyā, crossed the Ganges near Prayāg and passing through the Vindhya-territory and Mahākośala (North M.P.)., arrived at Vidarbha.

The cloud of the Meghadūtam might have easily moved directly passing overhead through the insurmountable barriers like the dense forests and the high hills but he had been requested to take to an indirect route (Vakraḥ panthāḥ, P. M., 27) to witness the beauty of Ujjayinī. From this we may presume the importance of the Ujjaini-route connecting the north with the south India, as evidenced by the author of the Periplus, still continued in the Gupta period.

Kālidāsa refers also to the maritime trade of India. The sea-route to Persia has been alluded to in Raghu (4. 60). The people of Vaṅga are described in Raghu (IV. 36) as possessing war-ships ("nau-sādhanodyatān"). Bengal, being the land of rivers and near the sea, her people naturally were better accustomed to boats and ships. Kālidāsa mentions the use of canoes, and the rowing of the coastal boats. (Raghu IV. 36; XIV. 30). His term "nauvimāna" shows

that some assumed the shape of a canopy. (Raghu 16, 68). He refers to sea-trade for the import of spices from other islands, most probably Ceylon and the isles of S. E., Asia. (Raghu VI. 67 and XIII. 1-17).

Kālidāsa has highly spoken of the trade-routes which were definitely under the strong rule of the Gupta Kings, made secure from all robbers and pirates. He says in the Raghu-vaṃśa (XVII. 64)—"caravans wandered at ease over mountains as if their own houses, over rivers as if wells and over forests as through gardens". But sometimes routes were proved dangerous for traders; specially those passing through forests and hills were infested with robbers and ferocious animals. That is why merchants moved together under a caravan merchant (sārthavāha), But the merchants who were moving under the caravan leader from Vidarbha to Vidiśā, were attacked and robbed of by a gang of robbers. (Mālavikāgnimitra, Act V.). We hear of the great shipwreck which a rich merchant of Hastināpura suffered, and also of his merchandise being handed over by the king Dushyanta to his pregnant wife (Śak. VI).

(iv)

TRADE-ROUTES BETWEEN INDIA AND THE FAR EAST

It is very likely that by the sea route India expanded herself and established a Greater India in the far east. But the exact day of opening this route is not precisely known. Dr. Bagchi says that "in view of the close ethnic relations between the pre-historic races of Further India and India, it has been presumed that the sea-route was taken by the Austro-Asiatic races in very early times. The Aryan invaders after their conquest of the coastal regions of India simply utilised the technical knowledge of sailing which these people poss-

essed."[150] D.G.E. Hall also says that" relations between India and South East Asia probably go back far into the pre-historic period. Traders from both sides must have visited each other's ports. It seems probably that small Indian commercial colonies existed at S. E. Asian ports long before the introduction of any marked cultural influence. One would suspect that the same in reverse is true of the Indian ports, since in the historical period Indonesian commercial colonies were to be found both in Bengal and on the Coromandel coast."[151] The cause of India's earliest expansion in the S. E. Asia is, according to Coedes as quoted by Mr. Hall (p. 17), pre-eminently commercial in character. India was attracted to the Far East only to procure gold, spices, scented woods and perfumed resins for trade purposes.

H.G.Q. Wales makes a distinction between the "Western Zone" (Ceylon, Burma, Central Siam, Malaya Peninsula and Śumatra) and the "Eastern Zone" (Java, Champā and Cambodia) of Greater India in J.R.A.S., 1946. He also opines that "the Indians reached the islands by all the sea-routes but the dangers of the long sea-journey to the more distant parts of continental Greater India were undoubtedly in part and at certain periods, avoided by the use of overland trails across the Malay Peninsula."[152]

Dr. R. C. Majumdar draws our attention to the voyages between India and Suvarṇabhūmi, as reflected in the Jātaka stories of C. 3rd cent. B. C.,[153] which relate the adventures of the son of the king of Videha, of the carpenters of Benares and of a blind mariner of Bharukaccha. The Bṛhatkathā of Guṇāḍhya, who possibly lived in the period of our discussion also contains many such stories of journey to the Far East, of which Sānudāsa's adventure will be given later on (In-

150 Comprehensive Hist. Ind., Vol. II, p. 771.
151 D.G.E. Hall - A History of S. E. Asia, pp. 12-13.
152 H.G.Q. Wales. The Making of Greater India, p. 22.
153 Hindu colonies in the far east, pp. 8-9.

fra page 73). The Periplus testifies to the regular intercourse between India and the Far East, as reflected in its sections, 60, 63 & 64.

"Chryse" is known in Indian literature as Suvarṇabhūmi, which comprises the insular and Peninsular parts of the Far East. "This" of the Periplus stands for China. The invariable association of "Chryse" and of "Ganges" in the Periplus leads us to suppose that there was a regular traffic, direct or coastwise between the two. Two types of vessels, one meant for coastal voyage and the other for direct voyage across the sea are also mentioned in the Periplus. (60).

Ptolemy also knew of "Chryse" and of "This". He refers to the Apheterion, just south of Paloura, where "the ships bound for Chryse" ceased to follow the littoral and entered the high seas."[154] He mentions "Kattigara, as the port of the Sinai" (VII. Ch. 3. 3) and hence we may take it to be the goal of all ancient sailors bound for China.

H. C. Clifford points out, "The sea-route to China via the straits of Malacca, even though it was not in general use, was no longer unknown to the mariners of the east."[155] The sailor Alexander sailed to Malay not long after the period of the author of the Periplus.

S. Lévi shows that the city of Paloura, so important in the eastern trade was nothing but Dantapura in Kaliṅga which loomed so large in the Buddhist literature. Ptolemy places it in the Gangetic gulf, 136° 40', 11° 20'; from which a direct voyage to Sada on the east coast of the Bay of Bengal was made in his days.[156] From this we may assume that generally there was no direct voyage from the Coromandel coast to the East. J. Dubreuil[157] held the view that the apheterion was

154 McCrindle, Ptolemy's Geo., p. 66.
155 H. C. Clifford, *Further India,* N. Y. 1904, pp. 6-7.
156 Cf. Gerini, p. 47.
157 *Anc. Hist. of the Deccan,* pp. 86-88.

situated near the mouth of the Godāvarī. Krom[158] emphatically opines that it is hard to believe, simply on the Periplus that there was a direct voyage from South India to the Far East in the days of the Periplus.[159]

This much we may accept to be true is that ordinarily Paloura was the reputed apheterion for the Far East and it was connected with South India by a coastal voyage. That is why the Chinese referred to Java and other isles as "Kling" which is possibly an abbreviation of Kaliṅga. This is a definite proof of the fact that Kaliṅga played a very prominent part in indianising the Far Eastern countries through Paloura.[160]

Takkola was an important point just on the opposite shore. It is mentioned in the Niddesa, the Milindapañha (p. 359) and also in Ptolemy which places it as Takola, a port of commerce on the coast of Trans-Gangetic India, in the country of the Chersonesus of Gold.[161] M. Pelliot has translated a Chinese passage in connection with the voyage of an ambassador sent by Funan to India in the times of the Wu dynasty (222-227 A.D.). --"The ambassador left the port of Tou-kiu-li of Funan and followed a large bay of the sea; right to the N. E. he entered many a bay and passed by the coast of many a kingdom. At the end of one year he reached the mouth

158 Gesshiedenis. p. 53.

159 Prof. R. C. Majumdar has strongly opposed the view of Prof. N. K. Śāstrī that the South Indians of Malabar and Coromandel coasts colonised S. E. Asia by the sea-route and he established his own that N. India, through the port of Tāmraliptа had a lion's share in this colonisation. He has based his arguments mainly on the Periplus and Ptolemy. He puts a more positive evidence of the Chinese texts of the 3rd cent A. D. from which we learn how a trader from Western India reached Funan in the 2nd quarter of the 3rd cent. A. D. and Fanchan sent to India an envoy who had embarked at Takkola and reached the mouth of the Ganges.

160 Prof. U. N. Ghoshal points out that in the 2nd cent. A. D. a regular sea-route was in operation from the E. coast of India to the opposite coast. (Comp H. I., vol II., p. 446). cf Ptol VII. I. 15.

161 Ptol, VII. 2.5 Mr. Kanakasabhai identifies it with Talaitakkolam of the king Rajindra Chola I. (Madras Review., Aug. 1902).

of the river of India." If Tou-kiu-li corresponds to Takola, it must have served as a port of Funan for her relationship with India in the 3rd cent. A. D., M. Pelliot mentions Kiu-li as another port of embarcation. Gerini[162] also accepts the view of placing Takola on the west coast of Malay Peninsula to the south of the isthmus of Kra.

Takkola is also a Sanskrit word. One of the editions of Amarakosha used by T. G. Śāstrī mentions "Tokkolam" instead of Kokkolam in verse III. 6. 129-130 of Amara. The Rāmāyaṇa also mentions 'Takkola' along with "Sweet smelling fruits"[163] Takua Pa was the first colony and "the first landing stage of Indian traders" in Malay.[164] It served as the first anchorage on the W. coast of Malay where the early settlers of India were attracted probably by tin, the main output of this area.[165]

Ptolemy's Takola is according to Gerini,[166] "a mart and a district rich in tin ... where tin working has been carried on from time immemorial." Gerini places the mart in the Pāk-chān inlet, a splendid harbour, which, he thinks "must have been used by ships from a very early period, since it was the terminus of a much frequented land-route across the Kra Isthmus; while tin-ore abounds in the vicinity at Malivan, Ranong and all over the surrounding country." He points out that this overland route across the Kra Isth., became more popular after the dis-appearance of the supposed sea-route between Trang and Ligore about the beginning of the Christian era.[167] Gerini concludes that there was once a watery passage between Singora and Bandon on the east coast and Kedh and Kortie on the west coast, through which sea-going ships must have crossed from one side to the other of the

162 J. R.A.S., 1897, p. 572; Researches on Ptol, p. 86.
163 Rāmā, III. 35. 22.
164 Hindu colonies in the Far East by Dr. R. C. Majumdar - p.16.
165 H.G.Q. Wales. I.A. & L., Vol. X. No.1. pp. 1-31,
166 Gerini, pp. 88-91.
167 Gerini, p. 115.

Peninsula. He says "There are traditions of ships from India and Ceylon having come across that way to the gulf of Siam." He found boats travelling, during the rainy season, "nearly all the way between Paklan and Bandon and also for a good distance, between the Trang province and the inland Sea of Phettalug." [168]

Besides these, Mr. D.G.E. Hall speaks of a few more short-cuts between the east and west coast of Malay. "Farther north there was a route from Tavoy over the three Pagodas pass and thence by the Kanburi river to the valley of the Menam. Two ancient sites, P'ong Tuk and Pra Pathom lie on this route. Further still to the north lay a route to the Menam region by Moulmein and the Raheng pass." [169]

Hence we may assume that the colonists took to two courses to go to the eastern side of Malay. Some passed through the straits of Malacca, infested with Malay pirates; while some others went through the safer route overland to the east coast. Dr. H.G.Q. Wales says that "the region round the bay (of Bandon) forms a cradle of further eastern culture." He speaks of the colonies of Weing-Sra, Caiya and Nakhon Sri Thammarat. He says that "there are two possible routes. The two in the north, the Mergui-Pracuab crossing and the well-known Kra-route and the two southern routes pass from Trang on the W. coast respectively to Nakhon Sri Thammarat and Patalung." These routes served to spread the waves of Indian culture and commerce from Takua Pa to the Further East.

An interesting light is thrown upon the subject of colonisation in the S. E. Asia through these routes by one of the inscriptions in Sanskrit found in Wellesley, which records the erection of the Sima slab by "the great ship-owner Buddhagupta, an inhabitant of Raktamṛttikā.[170]" (about 400 A. D. according to Kern).

168 Gerini, p. 79.
169 History of South East Asia. p. 22.
170 Kern identifies Raktamṛttikā with the port 'Chihtu' meaning

There was an overland route through Burma joining India with China and Tonkin. Gerini thinks of immigrants flowing from N. India through overland routes of Manipur and Burma and influencing N. Indo-China as far as the Tonkin gulf and the borders of China.[171] The Irrawati is navigable for about 800 miles from the sea. Most of the important towns and harbours like Bhamo, Ava, Mandalay, Prome, Rangoon and Bassein stand on its banks or near its mouth. Burma, accessible both by land and water, attracted traders of India from a very early date, at least before the 2nd cent. A. D., in as much as the Sanskrit place-names mentioned by Ptolemy have been identified enough to prove it. Paddinapillai, (1. 191) probably of the 1st cent. A. D. speaks of commercial intercourse by ships bringing commodities from Kalakam (the old name of Kaddaram in Burma) to Kāverīpaddinaṃ.

Thus while the Indian traders were leading their caravans over the mountains and across the deserts of C. Asia, China and Iran, Indian sailors were also sailing either coastwise or across the seas to the Far East. The very names of Indo-China, Further India, Insulindia and Indonesia etc. are as significant as Ser-India, implying an extension of Indian culture in the East. Ptolemy's term. "Trans-Gangetic India," applied to the region between India and China on the east side of India speaks of Indianisation of those areas. Indo-China is practically a very ancient buffer-state between India and China through which the two countries exchanged their culture.

The Buddhist writers show a more intimate knowledge of the Far Eastern countries. The Milindapañho and the Nid-

'Red Earth.' Gerini takes it to be Mergui or Berabai (p. 83). Yuan-Chwang mentions a Buddhist monastery near Karṇasuvarṇa, capital of Gauḍa (Bengal). He calls it "Lo-to-wei-chit" meaning "Red clay." Watters takes it to be "Lo-to-mo-chih" i.e., Raktāmṛta. (Vol. II. p. 192). Cunningham equates this with "Rāngāmāṭi, 12 miles from Murshidābād, on the Bhāgirathī, which served as the main channel of trade between Bengal and the Far East.

171 Gerini. p. 122.

desa contain geographical knowledge of the Far East. The former is an abbreviated variant of the same list of the latter. The author of the Mahāniddesa, commenting on the word "torment" (parikissati) in the Suttanipāta enumerates the various kinds of torments:— "Or still more, under the influence of desires which dominate his soul in quest of pleasures he sails on the great ocean, either frozen or burning, ...he goes to Gumba, Takkola, Takkasilā, Kālamukha, Maraṇapāra, Vesuṅga, Verapatha, Java, Tamali, Vaṅga, Elavaddhana, Suvaṇṇakūta, Suvaṇṇabhūmi, Tambapanni, Suppāra, Bharukaccha, Suraṭṭah, ... Yona, Paramayona, Allasanda, Marukantāra, Jaṇṇupatha, Ajapatha, Meṇḍhāpatha, Saṅkhapatha, Chattapatha, Vaṃśapatha, Sakuṇapatha, Mūsikapatha, Darīpatha, Vettapatha, and thus is tormented, much tormented.[172]"

The Milindapañha describes, "It is thus, O great king, that a rich captain, after paying exact dues at the port, sails on the great ocean and goes to Vaṅga, Takkola, Cīna, Sovira, Suraṭṭha, \Alasanda, Kolapattana, Suvaṇṇabhūmi, or to all other ports on the sea ..."

S. Lévi has written a learned article on this interesting passage.[173] It is an important document of the sea-going trade in ancient India. It describes 24 localities (No. 1-24) on the sea-shore visited by merchants, and ten extraordinary routes (25-34 Nos.) which the merchants had to take to by land, apparently landing at the harbour on the sea-coast. The series of ports mentioned in the list of the Mahāniddesa were definitely of singular importance; some of them are now of little importance or ignored, while some others, such as Java, Suppara, Bharukaccha (Broach), Suraṭṭha, and Yona (ths Greek World) are still wellknown centres of trade. Of 24, Nos. 15 to 24 belonged to the western side of India, while Suvaṇṇabhūmi, Vesunga, Verapatha and Takkola correspond to Ptolemy's Chryse Chora, Besyngeitai, Berabai and Takkola.

172 7. Aṭṭhakavagga.
173 Etudes Asiatiques, Vol. II. pp. 1-55.

Suvaṇṇakūta and Suvaṇṇabhūmi ("Land of Gold) correspond to Chryse of the Greeks and the Romans, roughly to the "Trans-Gangetic India" of Ptolemy. Kauṭilya speaks of Suvarṇakūḍyaka[174] a country of rare and precious objects, i.e., "tailaparṇika" (a variety of sandal) and "dukūla". Crawford mentions sandal of Timor as the best of the kind in his history of Indian Archipelago (1. p. 519). Dukūla meant 'silken fabric.' 'Patrorṇa' (wooe of the tree leaves) came from Suvarṇakūḍya. According to Kauṭilya Patrorṇa and China-silk were of the same class. The Chinese geography of the first few centuries of the Christian era mentions in South East Asia "Kin-lin," which is, according to M. Pelliot, "frontier of gold." (B.F.F.E.O, IV, p266ff).

Kālamukha is mentioned in the epics as the name of a tribe and the country on the Arakan coast. There is nothing corresponding to it in Ptolemy. The Rāmāyaṇa mentions them as inhabiting the eastern region among the Kirātas. According to Ptolemy the Kirātas are to be placed between the Ganges and Tokosanna; beyond this river was the country of silver (Argure). The Mahābhārata mentions "Kirātāḥ ... Chīnāh.[175] The Kirātas are usually associated with the Himalayan region in the old literature. It speaks of Kālamukha in course of Sahadeva's conquests of the southern countries.

Vesunga was a trading port near the mouth of the river Besunga. The country of Besungetai is in the vicinity of land of gold, situated beyond the Land of silver. Ptolemy[176] locates the "mart Besynga" in Pegu to the north of the gulf of Martaban, at Lat. 9°.[177] Verapatha most probably corresponds to Ptolemy's 'Berabai', the emporium of Berabonna just after Sada.[178]

174 Kau. II. XI. 79.

175 Mbh. (P. T. Śānti, Ch. 65. v. 13. (Bhandarkar ed. -12. 65.13)

176 Ptol, VII. 2.4.

177 Gerini, however, locates Besunga, the mart at the present Rangoon. pp. 72, 76 & 77.

178 Ptolemy, VII, 2. 3. Gerini has identified Berabai with Mergui

Java needs no explanation. It corresponds to Ptolemy's "Ibadiu, very fertile and productive of very much gold," included in the transgangetic division of India.[179] It is Yavadvīpa in Sanskrit and the Chinese annalists mentioned it as Yetiao as early as the 2nd century A.D. Its colonisation, either from Gujrat or from Kaliṅga in the 1st century A.D., has already been referred to. Java, Sumatra and Borneo were commercially connected with the mainland from a very early date. Four Sanskrit inscriptions, dated 400 A.D., have been discovered at Maura Kaman on the Mahakam river, an ancient sea-port. Fahien's report refers to merchant-ships plying between India, Ceylon, Java and China.

Tamali is a variant of Tamalin or Tāmraliṅga, referred to in a Sanskrit inscription at Caiya in Malay. Hence it must have been at Malay.

"Vaṅga" mentioned in the above list is a great puzzle. It is not definitely Bengal as some may suggest. Lévi has taken it to be misreading of Vaṅkaṃ which has been identified with the isle of Banka to the east of Sumātrā. The strait of Banka is the route necessary for small navigation between the Malay Peninsula and its opposite shores or between Java and its opposite shores. It is just opposite to the estuary of the river of Palembang, which occupied an important position as Singapur in our times. Gumba, Maraṇapāra and Elavaddhana are obscure. Takkaśilā is also puzzling to us, because of its mention in between the two, which are definitely of the eastern regions. Hence its identification with Taxila is not possible. Lévi takes it to be the river Tokosanna, mentioned by Ptolemy near the Arakan coast;[180] at the mouth of which Barakoura, a mart is mentioned to have existed.

on, geographical and philological and historical grounds. Merguishould be, again, equated with Raktamṛttikā, the ancient sea-port. pp. 82-83.

179 Ptol. VII. 2. 29.

180 Ptol., VII. 2. 2.

Thus an examination of the list of the Niddesa and its comparative study with due attention to the list of Ptolemy lead us to conclude that India was commercially connected by the sea-route with both the West and the East and specially with a large part of the countries of the Far East. Both Ptolemy and the Niddesa belong almost to the same period. The list begins with the Far Eastern countries and then an itinerary returns to India via Tambapanni and it mentions the most important ports of the west coast of India, viz., Suppāra, Bharukaccha, Suraṭṭha etc. and then again the Greek colony (Yoṇa), the "Great Greece" (?) (Paramayoṇa) and Alasanda (Alexandria). By the term "Yoṇa", the author means perhaps any Greek colony and by "Paramayoṇa," Greece herself.

The list of the Niddesa is interesting all the more because of its reference to 10 extraordinary routes. The Saddhammappajjotika, the commentary of the Mahāniddesa (1. 347. Siamese edition) notes, "The 24 words from Gumba to Marukantāra are names of countries. Marukantāra is a land of sand." Marukantāra hints at the desert routes both in and outside India. The list speaks of Jaṇṇupatha (the road of knees) as the way where one had to crawl on knees, of Ajapatha (the road of goats), of Meṇḍhapatha (the road of sheep), of Śaṅkupatha (road of stakes), of Chattapatha (the road of umbrellas), of Vaṁśapatha (the road of bamboos), of Śakuṇapatha (the road of birds), of Mūṣikapatha (the road of mice), of Darīpatha (the road of caves) and of Vettapatha (the way of crossing with canes). Besides, Patañjali, while commenting on Pāṇini's sūtra v. 1. 77. quotes Kātyāyaṇa's "ajapatha-śaṁkupathābhyāṃcha" 'which means,' "also in the case (of a person who passes) and also of a (merchandise imported) by Ajapatha and Śaṅkupatha, (the derivatives ajapathika and Śankupathika are formed). The term "cha" in Pāṇini means that it includes, besides the case of merchandise imported, the case of a man who passes by that way. The Vārtika implies that men and materials passed through the

routes of goats and of stakes. The rule of exception "madhu-kamarīchayoraṇ sthalāt" is a clear proof of such passage by land-route. "Madhuka" means tin, according to Hemachandra, Halāyudha and Medinīkosha and tin must have been imported to India by land-route from Malay. "Marīcha" means black pepper, imported from Kiao-che (Tonkin), Yunnam, and Java.

The above list is also found in the Ślokasaṁgraha of the Bṛhatkathā. References to these unusual routes are also met with in Vimānavatthu, LXXXIV; Tittira Jātaka, J. III. 541; Milindapañha (p. 280); Vāyupurāṇa, ch. 47. v. 54 and Matsyapurāṇa, ch. 121. v. 56. The last few sources mention only some of these routes. The Purāṇas add a new one to the list, Kharapatha (the road of asses).

The Bṛhatkathā speaks of the adventures of a merchant's son named Sānudāsa who was a daring adventurer in seas. After several shipwrecks Sānudāsa got himself enrolled in the band of the adventurer, Acera who was intent on going to the land of Gold. The whole band crossed the sea and landed at the foot of a mountain. They ascended the mountain by clinging to creepers: this was the way of creepers. They came across a river on a plateau. This river turned everything falling in it into stone. Hence they crossed this river by means of bamboos, standing on both sides of the river and interlaced with one another. This was nothing but the path of bamboos. Then again they met a high and steep mountain, they kindled fire with wet branches of trees so as to produce smoke sufficient to attract the Kirātas who came to sell their goats to them. These goats were sure-footed carriers and acted as best helpers in crossing the precipitous ridges. This was the route of goats. Sometimes a fight took place between rival parties. Once Acera had his goats killed and covered themselves with their skin with the inner side exposed only to attract big birds which helped carrying them to their destination, the land of Gold. The bird carrying Sānudāsa was attacked by another bird and

the goat's skin was torn. Sānudāsa fell in a tank in a forest where he saw a river of golden banks.

The Vetrapatha (probably Vettādhāra or Vettāchāra of the Niddesa) was the path of sticks, as the leader of the caravan asked his companions to take hold of the sticks of the roads for scaling the mountain.

The Niddesa explains Śaṁkupatha (the path of stakes) describing the means of scaling a mountain, once used in ancient India. An iron hook, attached to a rope of skin was thrown up till the hook was planted in the mountain, then one went up with the help of the rope. Next he tied the rope to the spear and having caught hold of the rope with one hand, struck it by a hammer with the other till the spear was detached. He went up again and fixed the spear and repeated the process till he reached the summit of the mountain.

Dr. Bagchi[181] says that "as early as the 2nd cent. A. D. the Indian colonisers had reached the coast of Annam, either through Cambodia or directly by sea." He adds that "the men of Champā depended more on the sea for their communication with other kingdoms and made the ports on the Annamese coast accessible to the sea-traffic[182] Champā was thus an important stage in the sea-route from India to China. It was in direct contact with China both by sea and land-routes through Tonkin. The ports like Panduranga, Vijaya and Kanthara on the Annamese coast grew up as a result of her coastal-traffic with China. (Cf. India and China. p. 25).

The Chinese annals record how Funan was founded by a Brāhmin Kauṇḍiya in the 1st cent. A. D. At Oc Eo, its port a gold medal of the Roman emperor Antoninus Pius of 152 A. D., together with Sanskrit seals of the same period has been explored to prove beyond doubt its contact with India

181 India and China. p. 24.
182 India and China. p. 24.

and Rome in the 2nd cent. A. D. Mr. D. G. E. Hall [183] says that Oc Eo was "a very early centre of foreign merchants, as early as the 1st cent. A. D. The country was intersected with channels which made it possible for Chinese travellers" to sail across Funan "on their way to the Malay Peninsula." He also speaks of an overland route which "led from the Menam to the Mekong and passed over the Korat plateau via Si Teh to the Bassak region which was the cradle of the Khmer kingdom of Cambodia." [184]

Some objects were unearthed in 1927 in the village of Pong Tuk on the right bank of the Meklong or Kanburi river in the province of Ratburi. These finds form the earliest relics of Hindu culture in Thiland. They include a Graeco-Roman lamp of definitely Western Mediterranean make of the 1st or 2nd cent. A. D. They remind us of the embassy in 166 A. D. from Antun to China, mentioned in the Han annals. We hear of a company of musicians and acrobats from Ta-tsin to China by sea in 120 A. D. from the Chinese sources. A fine bronze Statuette of Buddha of about the 2nd cent. A. D., of the Amarāvatī School confirms the same contact.

The Graeco-Roman lamp throws light on the problem of the contact between the Further India and the Roman empire in the 2nd cent. A. D., But the Amarāvatī style of the image of the Buddha supports the possibility that the above lamp might have been an Indian copy instead of being an original one. The find-spot of these articles is also not so removed from the path of commerce, for traders chose the land-route across the Peninsula in preference to the sea-route via the strait of Malacca.

183 Hist. of S. E. Asia, p. 23.
184 „ „ „ „ p. 22.

CHAPTER II

Means of Communication

As regards means of transport Prof. Rhys Davids[1] says, "There were made no roads and no bridges. The carts struggled along slowly through the forests, along the tracks from village to village kept open by the peasants. The pace never exceeded 2 miles an hour, smaller streams were crossed by gullies leading down to fords, the larger ones by cart ferries." R. L. Mehta[2] says that "as for facilities of communication, they were decidedly few and that too bad. Roads were not well constructed and were infested with robbers thus impeding free communication. Water-transport was comparatively good. The coast was not developed, though natural and rough harbours did help the adventerous traders of Bharukaccha or Champā."

However, we come across the terms, "Mahāmagga," Mahāpatha and Rājamagga, i.e., 'highways' and 'royal' roads' and 'Upapatha,' i.e., 'bye-lanes or bye-roads;[3] which suggest the existence of good roads. But roads were not free from dangers. They passed through forests and deserts and they were beset with wild beasts, drought, robbers, poisonous trees and so on. The Jātakas contain many evidences of such undesirable elements. The Apaṇṇaka (J. 1. 99) and Vaṇṇupatha Jātakas throw a flood of light on the difficulties experienced by caravans of trade. If it was a forest, the travellers marched all day long, and at sunset they unyoked their carts and made a laager, tethering the oxen to their wheels. The oxen were kept in the middle only to be well guarded from wild beasts. If the route was through a desert, they had to march

1 Buddhist India. p. 98.
2 Pre-Buddhist India. p. 182.
3 Jat. 1. p. 351. II. p. 3, 70 & 303.

by night because the sands of the desert grew as hot as a bed of charcoal embers at day time. Hence Pliny[4] in his account of the journey on desert on the Red Sea border has mentioned that the caravan leaders had to take firewood, water, oil, rice and so on on their carts during their march at night. Travelling on the desert was like a sea-voyage with a pilot to guide them by his knowledge of the stars.[5]

Indeed the process of transport by carts was very slow and tedious. The carts were drawn by oxen and the broad rims of their wheels were protected by iron-bands. The Lalitavistara[6] speaks of two oxen, Sujāta and Kīrti, which carried the goods of two merchants, Trapuṣa and Bhallika from South India to North India. The Divyāvadāna[7] speaks of elephants, horses, and palanquins as carriers of merchandise: "Hastīgrīvāyāṃ gatvāsvapṛṣṭheṇa gaccheṭ asvapṛsthеṇa gatvā śivikāyāṃ gaccheṭ." It describes the journey of the merchant 'mūshikāhairaṇyikaḥ', who carried his loads of merchandise ('paṇyamārpya') by carts ('śakaṭaiḥ'), by coolies (bhārair), by camels (uṣṭrair) and by asses to the great sea (mahāsamudraṃ). C. V. Vaidya[8] points out that the Mahābhārata speaks of Gomis, appointed by merchants, for transporting grain and other commodities. These Gomis, a very healthy set of men kept hundreds of bullocks for transmitting goods. Thus the engagement of Gomis was the mode of transmission in good old epic days.

We have also the archaeological evidence to prove the use of carts in the 1st cent. B. C.. Excavations at Bhita under Marshall have yielded to the spade a number of antiquities, found on the floor level of the house which is supposed to have been the house of a Guild in the 1st cent. B. C.. The

4 Pliny. VI. 26.

5 Jāt. 1. p. 107. "Samuddagamanasadisam eva thalaniyāmako nāma ..... so tārakasaññāya satham tāreti.

6 Lalitavistara. Ch. 24.

7 Divyā. Cowell's edition. p. 501.

8 Epic India, p. 242.

most noteworthy of the finds are two wheels of a terracotta toycart. (F. 27-28)[9] Many other remnants of the similar carts and their riders were found in other buildings of the site.

The Jātaka (IV. 207-8) mentions carts or waggons, which were ordinary śakaṭas but there were also some carts of richer style. The ratha[10] or sukhayānaka was drawn by horses with better arrangement of seats: Litters or Śivikā-s [11] were used by the wealthy, mentioned in the Divyāvadāna, as shown above. Kālidāsa also notes the use of a palanquin (chaturas-rayānaṃ) for carrying Indumatī into the hall of the Svayaṃ-bara ceremony,[12] and also of camels and horses as carriers. (Raghu v. 32 and Amara - 8.46-47). Oxen are mentioned in the Amarakosha (9. 65-66) and in the Bṛhatsaṃhitā (LXI. 14 - "Śastāḥ sarve cha bhāraṣahāḥ") as used for transport. Elephants were also used by the rich for riding. The re-peated mention of elephant-drivers in the Bṛhatsaṃhitā (XV. 11, XVI - 27 and LXXXVII. 17, 42) suggests that elephants were frequently used for transport. That is why Manu pres-cribes a heavy fine of 500 paṇas for the killing of such big animals. Śukra also mentions the elephant as the best beast of burden (Śuk-IV. 7. 352-353). Yuan chang also refers to the elephants of Kong - u- to (near about Ganjam) used as means of "conveyance to make very long journeys" (Beal. II. 207).

Carts or chariots being the ordinary means of communi-cation, inland trade was a very risky affair. The transport of commodities was fraught with a number of perils. Rob-bery was the order of the day. But no risk no gain. Hence inspite of serious handicaps merchants took their cargoes to different parts of India. owing to the allurement of

9 A. S. I. R. - 1911-12, p. 32.

10 Mbh. 1. 144. 7; Anuśāsanaparvan, 118.14 (P. T.)

11 cf. also Mbh. 1. 80. 21. "Tataḥ kanyāsahasreṇa bṛtā (P.T.) śivikayā tādā."

12 Raghu. VI. 10 and V. 32 ("uṣtravāmīśatavāhitārthaṃ").

a substantial profit, which was then much larger than these days of keen competition and which was sufficient to cover the risks and losses entailed enroute. Boats were used in crossing the rivers. In connection with the position of transport in crossing rivers, as reflected in the Jātakas, R. L. Mehta[13] says, "The great rivers did furnish means of communication and some facilities of transport. Of bridges we have no mention. There were fording places and the streams and water courses were crossed by boats. There were canoes." A canoe, made up of rough planks, sewn by hemp, as represented on the Eastern gateway of the stūpa No. 1 at Sanchi, belonging to C. the 2nd cent. B.C.

The Divyāvadāna[14] mentions "naukramo" (bridge of boats). The Āyāranga Sutta[15] also lets us know how the monks or nuns should go through rivers by boats and how they had to face different perils of water journey and also how they would adopt different means of precaution for the safety. The Mahābhārata[16] also records the making of boats and their use.

We have already noticed in the previous chapter how India attracted merchants from different and distant corners of the Globe on account of her fabulous wealth in the shape of precious stones, pearls, silver and gold as well as in daily necessaries of life, such as rice, wheat, cotton and spices and for her manufacture of rare and fine articles of luxury. She drew the Phoenicians, the Egyptians, the Greeks and Romans no less than the Arabs. These foreigners carried on commerce both by land and sea. Indians also went out to both East and West, by land and sea. Hence they had to pay attention to shipping.

13 Pre-Buddhist India. P. 230.
14 Cowell's ed. p. 55.
15 Bk. II. Lecture 3, Lesson 1.
16 "Tato vātasahaṃ nāvaṃ yantrayuktāṃ patākinīṃ,/
ūrmikṣamāṃ dṛḍhāṃ krtvā Kuntīmidamuvācha ha"//.
(Mbh. I. 141. 5 ed. P. T.), cf. also III. 169. 3(P. T.)

Rhys Davids[17] cites an interesting passage referring to early sea-trade as follows: "In the Dialogues of the Buddha is a passage in the Kevaddha sutta of Dīgha. The Buddha says: 'long ago ocean-going merchants were wont to plunge forth upon the sea on board a ship, taking with them a shore-sighting bird. When the ship was out of sight of land, they would set the shore-sighting bird free. And it would go to the East, South, West and North and to the intermediate points and rise aloft. If on the horizon, it caught sight of land, thither it would go, but if not, it would come back to the ship again.' We come across similar things in the Ṛgveda. (Gibson's Vol. 1). "Varuṇa, who knows the path of the birds flying through the air, he, abiding in the ocean, knows also the course of the ships." "Do though, Agni, send off our adversaries, as if in a ship to the opposite shore." "Do thou convey us in a ship across the sea for our welfare.[18] (Ṛgveda, ed. Poona, Tilak Smarak Mandir, 1933) I, 15, 97, 7 and 8). It is a remarkable prayer of the Vedic Ṛṣi for safe conduct at sea.

The above quotations show signs of sea-trade, of no mean order. The sea-trade was mainly of Dravidian development. The Rāmāyaṇa suggests that those whom the Aryan invaders contemptuously called "monkeys", were masters of ships. Hanumān, in search of Sītā "flew" across the gulf of Manar to Ceylon and discovered her. Who can doubt that the wings he used were sails or that the Dravidians ferried across to Ceylon a force of Aryans who established the rule of 'Drāviḍadeśam' (?) The Milindapañha also suggests by way of similes the first-hand experience of sailing in the wide ocean."[19] (Infra).

17 Journal of the Royal Asia, Sec. 1899, p. 432.

18 "Dviṣo no viśvatomukhāti nāveva pāraya/
Sa naḥ Sindhumiva nāvayāti parṣā svastaye"//.
(Ṛgveda, ed. Tilak Smarak Mandir,
Poona-2, 1933; I. 15. 97. 7—8)

19 Ch. VII, 2.8-20.

The Indians were always restricted by their own attitude towards crossing the sea. They had definitely taken to small vessels for coast-voyage at the initial stage. Gradually they improved the method of shipping and began to cross the seas for trade with Malay, the Persian gulf and East Africa. In Alexander's time Nearchos was surprised to see the river traffic of the Indians. Agatharchides shows that although the Indians visited the Sabaeans, these controlled the trading and when the Greeks used the monsoons, and the Axumites arose in Africa, the Indians were still victims of trade rivalries and only the N. W. Śakas took to regular voyages. Barygaza sent 'large ships' to the Persian gulf with Parthian and not Arabian permission. The people of N. W. India traded in their own ships with N. E. Africa, upto cape Guardafui, and with Somali ports with Auxumite and Arabian sanction, through both Barbaricum and Barygaza. The author of the Periplus[20] saw "the ships lying at anchor at Barbaricum." The Indians could not trade in the Red Sea beyond Ocelis except when they had been allowed by the Auxumites.

The Periplus throws a flood of light upon the shipping of the period. It speaks of exports and imports of Barbaricum and Barygaza by means of "large vessels" (sec. 36). We come across 'large ships' sent by the kings of the interior to the marts of Nelcynda and Muziris. They are of two types, Sangara and Colandia (Peri. 60). The former are "very large vessels made of single logs bound together" and the latter are "those which make the voyage to Chryse and to the Ganges."

Schoff says, "The ships of the country coasting were the craft made of hollowed logs with plank sides and out-riggers, such as are still found in S. India and Ceylon. The larger type, Sangara were probably made of two such canoes joined together by a deck-platform admitting of a fair-sized deck-house. Dr. Taylor (*J.A S.B*, Janu. 1847, pp. 1-78) says that

20 Peri, 36.

the name "jangar" is still used on the Malabar coast for these double canoes. Caldwell gives the forms Changādaṃ in Malayālaṃ, Jaṅgala in Tulu and Saṅghādaṃ in Sanskrit, a raft. Benfey derives it from Sanskrit Saṅgāra, meaning trade."[21]

Pliny speaks of large ships plying for trade between Malabar and Ceylon. He[22] says, "The navigation was formerly confined to vessels, made of rushes, rigged in the manner familiar on the Nile. The vessels of recent times are built with prows at either end so that there may be no need of turning around while sailing in these channels, .which are extremely narrow." The tonnage of vessels is 3,000 amphorae (33 tons). Ships with "double prows" were used in narrow spaces.

The largest and most extensive Indian shipping was found in the Coromandel coast under the Chola king. The "Colandia" of the Periplus is perhaps of Malay origin, meaning 'ship'. R. L. Mitra[23] derives it from Sk. 'Kolāntarapota', i.e., "Ships for going to foreign shores." Schoff says that, "the Colandia which made the voyage to Chryse and were of great size, must have been similar to the Chinese junks." (p. 246).

Kauṭilya[24] informs us of the Board of Shipping. He speaks of "navigation not only on oceans and mouths of rivers but also on lakes, natural or artificial and rivers in the vicinity of sthānīya and other fortified cities." The commentator interpretes 'Samudrasaṁyāna' as 'sailing or boating close to the shore.' Kauṭilya speaks of fishermen using "the King's boat in fishing out conchshells or pearls" and also their own. He speaks of two sorts of boats, (i) the large boats (Mahānāvaḥ), provided with a captain (Śāsaka), a steersman (Niyāmaka) and servants to hold the sickle and the ropes and to pour out water; which were launched in large rivers, which could not be forded even during the winter and summer seasons;" and of (ii) "small boats launched in small rivers which overflowed

21 Schoff. p. 243.
22 Pliny, VI. 24. 82-3.
23 *Antiquities of Orissa*, 1. 115.
24 Kau, Bk. II, Ch. XXVIII, 126.

during the rainy season." He speaks of ships sailing on seas. Ships mentioned by him are of two classes, one 'the king's ship,' which could be used by passengers on payment of requisite amount of sailing fees (Yātrāvetanaṃ) and the others were of private enterprises, vessels carrying on merchandise, found sometimes touching at harbours on their way. He speaks of the local merchants and of foreign ones, who were allowed to trade according to his strict regulations. Kauṭilya mentions the posts of Superintendents of ships and boats with their respective functions which testify to a better system of shipping. The Port Commission supervised the sea and the river traffic. Boats were not allowed to launch when the river was in a dangerous state. Pirate-ships were also not wanting, which, he says, "shall be destroyed." Kauṭilya does not minimise the importance of carts, a small cart (laghuyāna-a cart of small speed) and a big cart (śakaṭa), i.e., a cart of a very great speed; drawn by bulls etc.

The comparatively large size of shipping on the Coromandel coast, as referred to above is indicated by the Andhra coinage on which a frequent symbol was a ship with two masts, apparently of heavy tonnage. The Pallava coin[25] shows the picture of a two-masted ship, like the modern coasting vessels. The Andhra coin[26] shows similarly a two-masted ship, presenting details like those of the Gujarati ship at Boroboodar and the Persian ship at Ajaṇṭā. The shipping of the Andhra and Pallava coins survives in the modern "Mosula boats" of Madras. "The harbour of Madras can never be a harbour of refuge and all that the works will secure is immunity for landing and shipping operations from the tremendous surf which is so general along the whole of the Coromandel coast. Passenger traffic from the shore to the vessels is carried on by jolly boats from the mosula boats from the shore. These boats are relics of a bygone day when Madras was an

25 Elliot Coins of South India, Plate I. Fig. 38.
26 „ „ „ „ II. 45.

open roadstead and when landing through the surf by any form of jolly boat was a matter extremely difficult, if not impossible."[27]

Sometimes Indian ships had three masts. Pictures of a three-masted ship and a royal barge are displayed on the walls of the Ajaṇṭā caves.

The Periplus mentions boats: "Native fishermen in the King's service, stationed at the very entrance in well-manned large boats, called "trappaga and cotymba" go up the coast as far as Syrastrene, from which they pilot vessels to Barygaza."[28] These boats went up the coast, piloted foreign ships to the mouth of the Narmadā and towed them up the river to Barygaza.[29] But ships at the mouth of the Indus unloaded at Barbaricum on to river-vessels.

The close scrutiny of the Tamil epics lends us informations about the means of transport used in South India. "20,000 carts laden with different kinds of merchandise from the northern country ... have arrived at the gate." The use of carts was very frequent. The Śilappadikāram[30] speaks of some vehicles, "this vehicle may be Kollāvaṇḍi, a cart drawn by bullocks or Kūḍarappaḍi, a cart with a hooded top." The editor of the text notes that in the Malaināḍu (p. 182) the vehicle is known as Kòlārvaṇḍi. From the description of Kovalam, riding a mule and Mādavi, a vehicle drawn by bullocks we may safely infer that these were used by persons of ranks in the early centuries of the Christian era. The use of horses for vehicles had not come into practice. If we enquire into the Mayidavolu grant[31] issued from Kāñchipura by the Pallava crown prince Sivakhaṃdavamma (4th cent. A. D.), we see that the prince offered the village of Viripāra situated

27 Furneaux, India, 254. Cf. Schoff, 244.
28 Peri, 44.
29 Peri, 36 & 44.
30 Sila., XXVI. 125-140, cf. Dikshitar, p. 298.
31 Ep. Ind., VI. p. 34.

in the Aṃdhāpatha to two Brahmins and one of the immunities (parihāras) granted to the village was 'a-paraṃparā-balivadha,' which means that the villagers had to supply bullocks for the bullock-carts used by royal officers when the latter went on tour through the country. Thus we are convinced of the use of bullock-carts in South India in the 4th Cent. A. D., as a means of communication not only for merchants but also for men of higher rank like royal officers. We may expect that this system continued from the earlier days of the period of our review.

R. C. Dikshitar[32] points out important features of boats in the country of the Tamils. "Among the earliest known crafts in S. India the fishing craft takes the first place. The Catamarans were a typical craft for fishing purposes. It was of 2 or 3 logs of wood secured by coir ropes, split bamboos being used as paddles. There was boat catamaran and boat canoe. With growing interest in trade, boat building was undertaken in large scale. Boat designs have been many and they varied from place to place. We have the Malabar dugout canoe, snake-boats, Kalla-toni of Kodikarai and so on. These are all survivals of the old craft." 'Gerini[33] has pointed out that' "all the boats built in S. India, Indo-China and Malay Archipelago and China upto quite recent times, have always been constructed exclusively of wood and kept together with wooden bolts and cords, without a single piece of iron in them. Kālidāsa[34] also refers to the materials for the making of river-going and sea-going vessels of trade supplied by forest.

The Śilappadikāram mentions a number of boats of different sizes and shapes. The chief shapes mentioned are like those of horses, elephants and lions.[35] "The Kollatoṇi types of boats have an eye carved on either bow with a figure of the patron goddess together with a propitiatry sign of a 'paran'

32 Dikshitar, Origin and spread of the Tamils. p. 41.
33 Gerini, Researches on Ptol. p. 424.
34 (Raghu IV. 31, 36; XIV. 30; XVI. 68; XVII.81 and Śak. VI).
35 Canto. XIII, II. 175-80.

or horse. This is said to avert the evil eye. Curiously ancient Egyptians, Greeks and Romans copied this. Remnants of these are still seen among the junks and sampans of China and Indo-China. The coracle covered with hide, familiar to us on the Kaveri and other big rivers was the one used to cross the Tigris and the Euphrates."

There was a custom that the crew worshipped Mariamman at Kodikarai before they launched out into the sea. The catamaron was the characteristic craft on the east upto the delta of the Kṛsṇā. The river craft of South India was fourfold. The earliest form was the use of the plantain-stem as catamaram, which is still in practice in Bengal and Tanjore. The second was the Chatty raft, as seen at Vellore. The third was the coracle mentioned above. The fourth system was double palm-butt dug out by name 'Sangā-daṃ'seen from the Goḍāvarī to S. India and Ceylon. Dikshitar points out, "There were sea-going ships of S. India called Surval. These bear three horizontal white bars painted with three lines of ash sacred to Śiva.

The Śilappadikāram[36] mentions boats and rafts of different types, used to cross the rivers. The names given there are "Nīrmāḍam, Nāvāi and Puṇai. Some of them were covered while others like the Puṇai were open; people either swam holding to it or they sat on it and crossed."

Indian shipping was gradually more developed from the period of Ptolemy to the days of the great navigation to Java. The first migration to Java took place somewhat about the 1st. cent. A. D. [37] from Kaliṅga and the subsequent colonisation from Gujrāt and the western ports might have taken place probably in the 5th cent. A. D. Kauṭilya's code of shipping, like that of Manu is a clear testimony to the subsequent development in the art of shipping and trade as well.

36 ed. Dikshitar, p. 202.

37 Cf. H. G. Rawlinson. *Intercourse between India and the Western World.* p. 139, and R. K. Mukherjee. *Indian Shipping. Ch. 1.*

Fāhien refers to a great merchant-vessel plying between Tamluk and Ceylon and also between Ceylon and Java. He refers also to the measure adopted for accidents that "astern of the great ship was a smaller one, in case the larger vessel should be injured or wrecked". (Beal, Intro. 1xxx). The terms "Jalamārga-gāminaḥ" and "Vārijīvaka", mentioned in the Bṛhatsaṃhitā (XV. 18) prove the existence of navigators and others who lived by water. The author of the Amara-kosha speaks of navigable rivers ("nāvyaṃ triliṅgaṃ nautārye striyāṁ nautaraṇistarīḥ- I. 10-Vārivargaḥ"), of different types of boats, even of merchant-ships bound for other islands (saṃ-yātrikaḥ potavaṇik), and of sailors and captains of ships ("Kar-ṇadhārastu nāvikaḥ niyāmako potavāhaḥ"). So shipping had been highly developed in the Gupta period.

We have also ample evidences of the commercial enterprises and the colonial expansion of the Pallavas in the Far East. (R. C. Majumder-*History of Champā, Suvarṇa-dvīpa*). Mahā-mallapuram was a flourishing sea-port, full of ships, laden with horses from western countries and merchandise from northern countries (J. Oriental Res, Madras. 1928. p. 152) even at the Saṅgam period. Its rise in the Pallava period is supported by Tirumangai who speaks of big merchantships frequenting this port (Periyatirumoli.. II-VI. 6). Two naval expeditions of Narasinhavarman I, (630-660 A. D.) as described in the Mahā-vaṃśa and in the Pallava inscriptions (S. I. I., vol. II, part V, p. 356) make us strongly believe in the naval power of the Pallavas by the middle of the 7th cent. A. D.

Yuan chwang refers to "the great greenish-blue elephants" of the country of Kong-u-t'o (identified with Ganjam by Cunningham— J. R. A. S., N. S., Vol. vi. p. 250) which were harnessed to their conveyances to make very long journeys. (Beal. Vol. 2. p. 207). He also mentions the accidents of "chariots from the frightened elephants running away" (Beal II. p. 188) and so we may surmise that elephants were used as a means of transport in his period.

CHAPTER III.

Ports of India with Coastal Marts

Let me propose to enquire into the ports of India in several sections, as its entire coast may be broadly divided into several sub-divisions, according to principle of language, laid down by Grierson in his Linguistic Survey of India.

(i)

Sindhī-Speaking Area

Sindhī is one of the members of the North-West group of the Indo-Aryan languages, described in detail by Grierson in his L. S. I., Vol. VIII. Hence let us begin our study with reference to the ports of the Lower Indus region, where Sindhī is widely spoken.

BARBARICUM:—At the mouth of the river Indus stood the famous port of Barbaricum, which has been identified with "Alexander's heaven." V. Smith thinks that it exists even at the present time under the name of 'Samārāh. 'E H.I., (2nd ed,.—pp 101-3)' Prof. S. N. Majumdar thinks that in the Sanskrit literature it has been described under two different names, 'Alakanda,' supposed to be derived from the term 'Alexandria' or 'Alexander' and 'Barbara' mentioned in the Purāṇas as a place in the western division. Barbara may be actually equated with Barbaricum of the Periplus and Barbarei of Ptolemy. The 'Barbaras' are frequently mentioned in the Mahābhārata.[1] The river Srotasī of the Barbar country and a lake Śrīghanṭa in a corner of the sea of Barbara are mentioned in a commentary on Kauṭilya's Arthaśāstra,[2] where the river has been taken as a source of pearls and Alakanda,

1 Mbh, (ed. II. 29. ed, P. T., II. 51. 23 ; Bhandarkar, 1944 ; 15 III. 51. 23; III. 253. 18.

2 Kau, II. XI. 78 ; (ed. Shamasastry. 76.)

famous for corals is shown as standing on the Srotasī. Kauṭilya mentions two varieties of coral, alakandaka (obtained in the mouth of the river of Barbara, see Comment.) and Vaivarṇika (of the ocean Vivarṇa near the island of Yavanas, see Comm.).

Thus we see that Alakanda of Kauṭilya was known as Barbaricum in the period of the Periplus only to avoid confusion caused by the use of the same term in the sense of other Alexandrias also. The Periplus speaks of Barbaricum on the shore at one of the seven mouths of the river Sinthus.[3] Ptolemy also places this town 'Barbarei' in the islands formed by the same river.[4]

DEMETRIAS-PATALA :— Alexander the Great had begun to build great docks at Patala and had left a colony there. Hence it is known as 'Alexander's haven.' Patala was a natural port of the Lower Indus valley. When conquered by Demetrius, it was refounded and renamed as Demetrias—Patala. A scholion to the grammarian Patañjali (p. 146) mentions a town Dattāmitri among the Sauviras and says that it was founded by Dattāmitra who is referred to in the Great Epic as king of the Yavanas and Sauviras and who is definitely Demetrius.

Pliny's[5] first two stages of trade-routes speak of Demetrius-Patala, near Barbaricum as the goal of ships from the west, first, coasting all the way and second, cutting across a bit of open sea from a point in Arabia, which he calls Syagros. Tarn[6] speaks of pepper-trade, pepper being exported from India on any scale in the period of Greek rule, through these ports at the mouth of the Indus. Indian vessels used to ply first coasting along Gedrosia to Arabia and the Persian gulf

3 Peri, 38.
4 Ptol, VII. 1. 59.
5 Pliny, VI. 96-100.
6 Tarn - GBI, pp. 370-371.

even before the time of Alexander from these places; for we know that Nearchos got a guide in Gedrosia who knew the coast as far as the gulf of Ormuz.[7] The Arabs had then a monopoly in trade in Indian spices and they sold Indian spices along with their own to the western world. When the Greek Eudoxus of Cyzicus first sailed from Egypt to India in C. 120 B. C., he returned with ships loaded with spices and precious stones.[8] Plutarch[9] says that in 88 B. C. Aristion of Athens had amassed large quantities of pepper in his house and this fixes the beginning of the substantial export of Indian pepper not later than C. 100 B. C.

We come across a number of inscriptions in the caves at Nasik, Junnar and Karle, in the country inland from Bombay. These inscriptions record the gift of many Yavana merchants, one of whom Indrāgnidatta the Yonaka is known to have been a citizen of Demetrius-Patala and all others must have been citizens either of Demetrius or of Theophila, as no other Greek poleis in the south are known. Indrāgnidatta, whose inscription[10] may be dated to C. 50-30 B. C. (Cf Tarn. p. 371) had come to Demetrius (Dātāmitiyaka) from the north (Otarāha). His donations show that he was a man of substance, able to confer large gifts. Hence we may easily infer that the ports at the mouth of the Indus were at the height of their prosperity in the first two centuries before Christ. This Greek colony of Demetriapolis in Indo-Scythia evidently remained in a flourishing condition, for the great poet Kālidāsa who lived in the Gupta period describes his hero Raghu marching there and fighting with the Yavanas on the other side of the Indus.[11]

7 Arrian, Indica, 21. 1.
8 Poseidonius in Strabo, II. 98.
9 Sulla, 13.
10 Luders No. 1140.
11 Raghu. IV. 61-64.

Now let us see the route from South India to Demetrius or Barbaricum by which spices were carried. We know that the main route ran from the south to Ujjain where it met the route from Barygaza going North-East. This main route continued northward from Ujjain by the way Apollodotus had once taken, passing through his foundation Theophila and so to Demetrius. All pepper of S. India was carried by this route to Demetrius, of course a long and tedious land-journey and all ships going westward had to call at Demetrius, the first centre of export before Christ.

The commercial importance of Barbaricum like that of Barygaza is proved beyond doubt bv the fact that both the Lower Indus valley and the region of Ariake were much coveted by all foreign rulers. The Greeks under Demetrius and Menander, the Śakas, the Parthians and the Kushāṇas— all turned their eyes upon these regions and managed somehow to occupy them. These ports were main outlets of Northern and Western India and connected her with the rest of the world. While Barbaricum and Patala were the main centres of trade in the first two stages of routes shown by Pliny (VI. 96-100), Barygaza and Sigerus rose to prominence in the period of the 3rd stage. Demetrius-Patala, stronghold of the Greeks in the 2nd cent. B. C.. was brought under the Śakas who established "Indo-Scythia" about 100 B. C.. Naturally the Greeks lost hold over the ports at the mouth of the Indus. As its immediate result we come across the third stage of development in trade-routes, as shown by Pliny (VI. p. 101), i.e., the direct voyage cutting out Demetrius and sailing from the Arabian coast straight to a port he calls Sigerus, somewhere south of Barygaza and naturally to Barygaza also, beginning about 60-50 B. C. "The cutting out of Demetrius threatened the pepper merchants there with ruin. Indrāgnidatta and his friends left the city, went south to the country behind Bombay and got on to the new pepper-route to the sea."

(ii)

Gujarāti-Speaking Area

GUJARĀTI:— It is "a member of the Central Group of Indo-Aryan languages. It is spoken in the province of Gujarat and also in the Peninsula of Kathiawāḍ. To the north it extends almost to the northern frontier of the Palampur state .... It has also encroached into Sindh. ... On the west it is bounded by the Rann of Cutch. ... It extends as far south as the southern border of the district of Surat, where it meets the Marathī of Daman."[12]

The region of Ariake.

BARYGAZA:—It was the famous port trading with the West, mod. Broach. It is a Greek term derived from Prākṛt 'Bharukaccha,' most probably a corruption of Bhṛgukaccha, a sea-port town of Bharu kingdom.[13] The Jātakas mention that from this port traders went to Suvaṇṇabhūmi, probably via Tāmbapaṇṇi and Nāgadvīpa, and to the west across the Arabian sea and the Persian gulf.[14] The Divyāvadāna[15] states that Bhirukaccha owes its name to Bhiru, a minister of the king of Roruka (probably Alor in Sind) in Saubhīra.

The district of Barygaza formed a part of the empire of Chandragupta Maurya. After the fall of the Maurya power it possibly passed under the Greeks and then under the Śakas who were in power in the period of the Periplus. The Periplus[16] states that the coins of Apollodotus and Menander were in circulation in its time in the port of Barygaza and thus points to the fact that it had been under the control of both the Greek kings and as Apollodotus was most probably a sub-king under Demetrius, the latter might have had the port

12 L. S. I, Vol. IX, pt. II., pp. 323-324.
13 Jat, III, 188, 190-G 57.
14 ,, ,, ,, 126-7. IV. 137-142.
15 Divyā, pp. 544.
16 Peri, 47.

under his control. The Periplus indicates that Barygaza was the port par excellence of the kingdom of Nambanus whose identification with the Śaka king Nahapāna is beyond any question.[17] Barygaza is also mentioned in the Nāsik (Lud. 1131) and Junnār (Lud. 1169) inscriptions. Geographical references in the inscriptions of Uṣavadāta show that Nahapāna's rule extended over as far north as Ajmer in Rajputna, Kathiawār, South Gujarāt, West Malwa, N. Konkon from Broach to Sopāra and Nāsik and Poona districts. From this we may conclude that Nahapāna in the 1st cent. A. D. must have controlled to a very large extent the trade of Western India, because the port of Barygaza with its rich and fertile hinterland Kathiawar was included in his dominion. The inscriptions of Nāsik and Karle seem to show that Ṛṣavadata ruled as Nahapāna's viceroy over S. Gujarāt and N. Konkon from Broach to Sopara and over the districts of Nāsik and Poona. Nahapāna controlled certainly the route from Mathurā via Ujjain and Minnagara, his capital to Broach, the most important port of the Śaka realm for overseas trade. Minor ports like Suppara and Calliena were probably engaged in coastal trade under the Śakas. The Śakas must have derived enough of revenues from the import duties at these ports. The Girnar record of Rudradāman mentions such a śulka or custom duty.

Barygaza lay on the river Narmadā and was difficult of access, on account of shoals and the extraordinary ebb and flow of tides. For this reason, rightly mentions the Periplus,[18] entrance and departure of vessels was very dangerous to those who were inexperienced and came here for the first time. Large ships were caught up by the force of the waters at the incoming time. Vessels were left stranded by the ebb-tide. The flood-tide came with such a rush and roar "like an advancing army" that it proved perilous to the luckless

17 J.R.A.S., 1946, p. 170.
18 Peri, 46.

ships. The Periplus[19] mentions the sailing course along the coast from Barbaricum to Papica to be of 3000 stadia. It adds further (44) that "native fishermen, stationed at the very entrance in well-manned large boats went up the coast as far as Syrastrene from which they used to pilot vessels to Barygaza." As regards the hinderland of this port, the Periplus (41) speaks of the coast of Syrastrene as "a fertile country" producing, besides wheat and rice, cotton to a large extent. The port is mentioned as a chief distributing centre of western India, from which the merchandise brought from outside, was sent to different parts of India. Paithan, about 20 days' journey south of it sent here for export waggons of onyx-stones, cottons, muslins and other local products. Cotton-cloth was brought down from Minnagara to here. "And from Ozene are brought down all things needed for the welfare of the country about Barygaza, and many things for our trade: agate and carnelian, Indian muslins and mallow cloth, and much ordinary cloth. Through this same region and from the upper country is brought the spikenard that comes through Poclais; that is, the Caspapyrene and Paropanisene and Cabolitic and that brought through the adjoining country of Scythia; also costus and bdellium"[20] As regards routes by which commodities flowed to Broach from Paithan and Ter, Fleet points out that in South India there were two great trade-routes, one starting from Masulipatam and the other probably from Vinokonda. These two roads met each other at a point about 26 miles towards the east-by-south from Hyderabad. And from that junction the single road ran through Hyderabad, Kalyani, Ter, Paithan and Daulatabad to Chandore and Markinda in the west of the Nasik district and thence through the difficult tracks along the Western Ghats to Barygaza.

19 Peri, 41.
20 Peri. 48.

A slight perusal of the Periplus helps us to know of the then commercial importance of Barygaza at least in its period. The Romans exchanged goods with the towns in the interior of India through Barygaza and this commerce between Rome and India increased in volume during and from Augustus to Nero, whose coins have been profusely unearthed in India. Ships plied "across the (Arabian) sea from Ariaca and Barygaza, bringing to the farside market-towns like Pano and Opone the products of their own places, wheat, rice, butter etc.[21] It records that Muza "is crowded with Arab-shipowners and sea-faring men" who "carry on a trade .... with Barygaza, sending their own ships there."[22] It mentions also large vessels regularly sent from Barygaza loaded with copper and sandalwood" etc. to Apologus and Ommana, from which again there were "exported to Barygaza .... many pearls but inferior to those of India, purple clothing, wine, dates, gold and slaves."[23] The section 49 is an elaborate list of the imports and exports of this port.

It is, however, interesting to note that Barygaza became more important than Barbaricum in the beginning of the Christian era. The Periplus records the relative advantages and disadvantages of the two ports. It mentions that the mouths of the Indus are infested with "serpents coming forth from the depths to meet you" (38) and are "very shallow and marshy so that they are not navigable except the one in the middle at which is the town Barbaricum." (38). Its author finds, of course, "ships lying at anchor at Barbaricum, but all their cargoes carried upto the Metropolis by the river to the king" and records the exports and imports of this mart. (39). On the contrary, Barygaza was more easily approachable straight by the river Narmadā and by "a better passage through the left" (43) of the gulf, which, being "very narrow and very hard to navigate" was equipped with boats and native fishermen

21 Peri, 14.
22 Peri. 21.
23 Peri. 36.

to pilot vessels safe to the harbour. Hence it served as the main western gateway of northern and also of southern India. All trade-routes from the north and the south have already been pointed out to converge there. Merchandise from Afghanistan and Central Asia and China were brought by the Ozene route to Broach, avoiding the routes along the Indus parallel upto Barbaricum. The Periplus notes that furs (seric skins) and silk-yarns were being sent from China by way of Bactria to Barbaricum; where as silk-cloth, more valuable as it was, was exported through Barygaza.

We know of two roads running parallel to the Indus on her both sides connecting Barbaricum with the Kophes region. Ptolemy distributes 41 places of the Indus valley into 6 groups. The towns of the 2nd group, by their relative positions indicate the existence of a great caravan route running parallel to the western bank of the Indus from the Kophes junction down to the coast. Similarly the towns of the fourth group indicate the existence of another caravan route on the eastern side of the river from the confluence with the combined river of the Punjab down to the delta. But notwithstanding the fact that Barbaricum was linked with the above two caravan routes with the N. W. India, trade flowed very little by these routes and as it has been shown above, Barygaza superceded Barbaricum so much so that it became practically the most important outlet of India, Central Asia and China. The reasons are not far to seek of. The Periplus (37), while giving an account of Indo-Scythia, speaks of Minnagara as being "subject to Parthian princes who are constantly driving each other out." On the contrary it informs us that Barygaza was the port of the realm of Nambanus (i.e., Nahapāna). Thus for the troublesome political situation of the Parthian princes Barbaricum was deemed unsafe and undesirable, whereas the peaceful atmosphere of Barygaza under the stronger ruler like Nahapāna commanded universal attention.

Ptolemy mentions Barygaza as a mart but it was not possibly as flourishing as in the time of the Periplus, for had

it been visited by sailors frequently, Ptolemy would not have given a wrong account of Larike, in which division the port was situated, making the Narmada flow from the N. E. to the N. W. and locating a group of towns to the east of that river, which lie really to the north and south of the same. (vide map, Venetus, 516). However, in the Mahāniddesa (1. 155) it is mentioned in a list of places to which men went for trade. Rudradāman had ruled over this region and under him Barygaza could have easily linked herself with the Sindhu-Sauvīra region, Malwa and the Māhiṣmatī region which were also within the rule of the same king. Hence this might have facilitated Barygaza's inland trade with the marts of these regions.

The Reclus[24] says that the Rann was probably an open sea until about the 4th cent. A. D. when a series of earthquakes elevated this whole region considerably. The author reports ruins at Nagar Parkar, the N. E. corner, indicating a large sea-port there. These changes may be one of the causes of the subsequent migrating of the Indians from this region to Java. Old harbour works are seen near Nagar Parkar, on the eastern side of the Rann. Within historical times it was possibly the scene of active sea-trade.

If it is a fact that Barygaza because less frequented by sailors from the west during the period of Ptolemy, as suggested above, it is almost definite that Barygaza lost her eminence as an emporium in the subsequent centuries and Muziris excelled Barygaza and attained so much importance in the eyes of the Romans for her pepper-trade that a temple of Augustus was erected there in the 3rd cent. A. D.

The Bṛhatsaṃhitā mentions ("Bharukachcha-samudra") Bharukachcha, the ocean in XVI.6 and XIV.11 and so we may infer the importance of the port and its sea-trade in the Gupta Period.

24 Asia. III. 142-5.

Yuanchwang also describes the economic importance of the region:— "the soil is impregnated with salt ... they boil the sea-water to get the salt and their sole profit is from the sea". (Beal. ii. 259) and again, "As the Surāṣtra country is on the western sea-route, the men all derive their livelihood from the sea and engage in commerce and exchange of commodities." (II. p. 269).

It is interesting to note that Surāṣtra maintained her prosperity even under the Maitraka Kings, who ruled from the end of the 5th cent. A. D. to that of the 8th Cent., at Valabhī, which became the prosperous centre of trade and commerce and supplanted Barygaza. Besides that of Yuanchwang as mentioned above, we have other literary evidences. Daṇḍī relates in his Daśakumāracharita (Ed. M. R. Kale, Bombay, 1925. p. 225):— "There is a city named Valabhī in Surāṣṭra. In it there is an owner of ships (Nāvikapati) named Gṛhagupta who can vie with Kubera in riches. He had a daughter named Ratnamatī. A merchant-prince named Balabhadra from Madhumati comes to Valabhi and marries her ..." This shows the economic importance of the city where ships were owned even by private individuals. Somadeva also refers to a Vidyādhara, son of a very rich merchant (Mahāvaniksutaḥ, Kathāsaritsāgaraḥ, taraṅga- 22. p. 85) of Valabhī, sent to another country to look to some business interests. He speaks of Devasena, a merchant of Pāṭuliputra coming to Valabhī for trade. (Tar. 29 p. 130).

Grierson on the authority of Kumārila Bhaṭṭa opines that South-India was in ancient times divided into two great-language-speaking areas, one of the Drāviḍa-bhāṣā (mod. Tamil, Malayayam, Kanarese etc.) and the other of the Andhra-bhāṣā (mod. Telegu). He omits the Aryan languages like Marathi and Oriya and hence we may think that Kumārila Bhaṭṭa definitely meant by South India the region, south of Vidarbha (Berar) and Dakṣiṇa-Kośala and not the entire region south of the Vindhyas and the Narmadā. The Mahā-

bhārata (III. 61. 218-23) also means the same thing when it points out:—"Etc gacchanti .... Dakṣināpathaṃ."[25]

The languages of the regions to the north of the Dakṣināpatha as strictly applied by the Great Epic and Kumārila Bhaṭṭa, are grouped by Grierson as belonging to the "Outer-band," i.e., Mārāthī, Oriyā, Hindī etc.

So the Peninsular India may be broadly divided into three natural linguistic areas, i) Drāviḍa-speaking areas of the extreme south, ii) Andhra-speaking areas just to the north of the former and iii) the areas of the languages of 'the outer-band' lying to the north of the Andhra region in the east and meeting the Dravidian speaking areas in the west.

(iii)

MĀRĀTHĪ-SPEAKING AREA

According to the survey "Mārāthī with its sub-dialects occupies part of three provinces, viz. the Bombay Presidency, Berar and the Central provinces, with numerous settlers in Central India and the Madras Presidency. It is the principal language of the N. E. part of his highness the Nizam's dominions and of Portuguese India. The area in which it is spoken, is roughly speaking, 100000 sq. miles." On the west Mārāthī is bounded by the Arabian sea, from Daman in the north to Karwar in the south. The northern frontier follows the Daman-Gangā towards the east and crosses Nasik, leaving the northern part of the district to Khandesi. It thence runs along the southern and eastern frontier of Khandesh, through the southern part of Ninar, Betul, Chindwara, and Seoni where the Satpura range forms the northern boundary. The frontier line thence turns to the south east, including the southern part of Balaghat and almost the whole of Bhandara with important settlements in Raipur."

"From the S. E. corner of Bhandara the line runs south-

25 Supra. p. 42.

westwards, including Nagpur and the north-western corner of Chanda ..... It then continues towards the south, including the district of Basim and into the dominions of His Highness the Nizam, where it again turns west to Akalkot and Sholapur. The frontier then goes south-west, in an irregular line including Sholapur and Kolahpur, to the Ghats and thence to the sea at Karwar."[26]

Aparānta is one of the most important countries of this locality. It is mentioned in the R. E. V. of Aśoka-" Yona Kamboja Gandharanam Rastikanam Pitimkanam ye va pi Aparānta." Kathiawad seems to have been the northern limit of this country as noted in the Mbh (1.211. 1-2). Rudradāman is noted as its lord in the Junagarh inscription. (Lüd. 956). Aparānta is also mentioned in the inscriptions, Nos, 1123 and 1013 (Lud.). Cunningham refers to some coins bearing the legend Apalatasa which, he concludes, was associated with Aparānta.[27] Mr. Allan, however, takes it as "of king Apalata" and not as "of the king of Aparānta."[28]

Daṇḍaka is a mere forest-region in the Rāmāyaṇa (Ch. 92-94). It is mentioned also in Vātsyàyana's Kāmasūtra (p. 24) and in Arthaśāstra (p. 11) and in the Bṛhatsaṃhitā, XVI. II and XI. 56. It is generally regarded as comprising the modern 'Mahārāṣtra' and its adjoining area in ancient times. Vidarbha (mod. Berar) is mentioned in the Nāsik inscription of the time of Vāsiṣthiputra Sri-Pulumāyi (Lud. 1123). The Mahābhārata[29] speaks of the river Payoṣnī flowing through this country, and of Kuṇḍina,[30] its capital, equated with modern Kauṇḍinyapura.[31] Daṇḍaka and Vidarbha were thus in the northern part of the present Mārāthī-speaking area. Daṇḍī speaks highly of the Vaidarbhī style

26 Linguistic Survey of India. VII. p. I.
27 Coins of Ancient India. pp. 102-3.
28 Allan. Catalogue of Ind. Coins, Anc. Ind, p. LXXXI. ff.
29 Mbh, III, 120. 31. (ed. P. C. Roy).
30 " III, 60. 2290; 73; 2853; 77. 3029. ed. Calcutta.
31 Cf. Amraoti Dist. Gaz, I, p. 406.

of sanskrit poetry. Even now the Mārāthi language of Berar called Varhadi is distinguished from Deśī Mārāthī, as reported in the L. S. I. (Vol. VII. p. 32).

To the south of Barygaza the Periplus speaks of the following ports and marts of Dachinabades region, as lying from north to south:—

a) Suppara, mod. Sopàra (19°25′ N, 72°41′E)
b) Calliena mod. Kalyān (19°14′ N, 73°10′E)
c) Semylla, mod. Chanl (18°34′ N, 72°55′E)
d) Mandagora, mod. Bankot (17°59′ N, 73° 3′E)
e) Palaepatme, mod. Dabhol (17°35′ N, 73°10′E)
f) Malizigara, mod. Rajapur (16°34′ N, 73°31′E)
g) Byzantium, mod. Vizadrog. (16°33′ N, 73°20′E)
i) Aurannoboas, mod. Malvan (16°3′ N, 73°28′E)

SUPPARA:— Prof. S. N. Majumdar identifies it with modern Sopara, mentioned above. Some scholars equate it with Ophir to which Solomon sent his ships.

Suppāraka, a sea-port town is hinted at in the name given to the master mariner in the Suppāraka Jātaka, in which, on the contrary, Bharukaccha stands out more prominently. It shows that Suppāraka was a later development but earlier than Aśoka, because here one of the edicts of Aśoka has been found.[32] There was a regular trade between Bharukaccha, Suppāraka and Suvaṇṇabhūmi.[33] It was connected by a road with Sāvatthi, 120 leagues to it north-east.[34] Vijaya with his followers landed there on his way to Ceylon but their behaviour incensed the people of Suppāra.[35] Horse-dealing was an important trade of this locality as we find Ubbarī mentioned as born a daughter of a horse-dealer there.[36]

32 Bhandarkar Aśoka. pp. 254-5.
33 Apadāna. ii. 476.
34 Dhammapadatthakathā. ii. 214.
35 Mahāvaṃsa. VI. 46; Dipa. IX. 15f.

In the days after Aśoka Sopara gained more importance because we find it mentioned in the subsequent inscriptions. The Kānheri inscription (Lud. 995) records the gift of a cistern by a merchant (negama) Samika from Sopāraga. Another Kañheri inscription (Lud. 1005) records the gift of a cave by a jeweller Nāgapālita, the (sop) - ārayaka. The Nānāghāt cistern ins. (1119) records also the gift of a cistern (poḍhi) by Goviṃḍadāsa, the Sopārayaka. The Nāsik inscription of Usavadāta (1131) speaks of donations made by him to gods and Brāhmaṇas at Sorpāraga. The Kārle inscription (1095) records the gift of pillars with relics by the preacher Sātimita from Sopāraka. The term 'Sopārkāhāra'[37] of one Kañheri ins. seems to indicate that Sūrpāraka was the name of a city and of a district, where a fragment of the Edict of Aśoka (VIII) was found out in April, 1882. These epigraphic evidences show clearly the importance of Sūrpāraka in the western Deccan and from the mention of merchants hailing from that place it is clear that it was an important trade-centre.

Śūrpāraka is mentioned several times in the Mahābhārata. We learn from the Sabhāparvan[38] that Sahadeva, in course of his digvijaya conquered it (tataḥ Śūrpārakaṃ chaiva ganaṃ chopakṛtāhvayaṃ) and from the Vanaparvaṇ[39] that there were two holy places in Sūrpāraka, connected with Paraśurāma, called Pāṣāṇatīrtha and Puraśchandra. The Epic says further that the ocean created for Paraśurāma the region of Sūrpāraka and this suggests to us an old tradition that the region was once under the sea, which, in the later days receded to the west making room for human habitations. The name of Rāmajāmadagni is always connected with this place. We may note in this connection that the Nāsik ins. of Usavadāta (No. 1131) speaks of Rāmatīrtha in this region.

36 DhA. IV. 50.
37 Jour. Bomb. Br. R.A.S. VI. p. 3. No. 5.
38 Mbh. 2. 28. 43. (ed. Bhandarkar).
39 " III. 73. 12 - ed. Haridās Siddhanta-vāgīśa.

The Periplus (52) mentions it as the first mart after Barygaza. It is also mentioned in the list of the Milindapañha and the Mahāniddesa. Ptolemy[40] begins his description of Ariake Sadinon with Soupara. Cosmas makes a doubtful reference to Sibor (Sopara ?), a place of great trade on the coast near Kalyāna. The Bṛhatsaṃhitā mentions its importance for diamonds of dark colour ("Kṛṣṇaṃ śaurpārakaṃ vajraṃ" - LXXX. 6).

Now let us discuss, bye the bye, the region of Ariake Sadinón of Ptolemy as distinguished from the Ariake of the Pirates.

Ptolemy records Ariake Sadinón as the coastal region extending upto Baltipatṇa in the south, identical with the Palaipatmai of the Periplus. He describes the same region inland (not coastal) extending upto Banabasi on the Varadā, a tributary of the Tungabhadrā.

The term 'Sadinón' is really very puzzling. Two leading theories are, however, put for its explanation, one representing 'Sātavāhana' in Prākṛt and the other representing the surname of Kaniṣka. But Ptolemy in figure 82 speaks of two royal seats, one of Baithana. the seat of Sātavāhana king Sri Pulumāyi and the other of Hippokoura, the seat of Baleokouros. One's subordination to the other is a matter of great misgivings. Hence the first theory fails to be convincing. Levi's theory of the extension of the rule over at least a part of the Mahārāṣtra region by Kaniṣka under the surname of Cheṇṭan, Caṇḍra or Caṇḍana as reported in the Chinese texts, is also equally questioned by some scholars to be wanting in proper archaeological evidences.

We should bear in mind, however, that the personal names Sata and Sati can be traced in the names of many villages, towns and districts in the regions which are or were Kanarese and that such place-names are frequently found in

40 Ptol. VII. 1. 6.

Bellary, Mysore and the Kanarese areas of Bombay. Ptolemy's Sadinon may have some connection with these nomenclatures and we may take the Ariake of Sadinon as extending upto the Sata or Sati area.

Przyluski, however, while discussing the derivations of the terms Sātavāhana and Sātakarṇi, opines that the word sata or Sada at its base means in Muṇḍa 'horse' and Kon-Koni means puttra or puta. This leads us to presume that 'Sadinon might have been originally an Austro-Asiatic term and we may infer that some Muṇḍa settlements grew up round the Aryan ones of Mahārāṣtra at the time of Ptolemy. (Cf. Ptol. VII. 1.6.).

CALLIENA:—

The Periplus (52) records that 'the city of Calliena' (Kalyāna) in the time of the elder Saraganus became a lawful market-town; but since it came into the possession of Sandanes, the port was much obstructed and Greek ships landing there might have chance to be taken to Barygaza under guard. His account hints at the troubles through which the trade of the Dachinabades passed in the time of the Periplus

It is generally believed that the march of the Scythians into the Konkan region resulted in the downfall of the port of Calliena, which was the most important port of the Sātavāhana kingdom. But this explanation is not convincing, for Kalyan, "situated at the foot of two regular ascents of the Western Ghats leading towards Nāsik and Poona respectively and with good access to the sea, was a natural outlet for the commerce in the west coast." Hence it would have been a source of prosperity to any power controlling it, and the Scythians would have made the best use of it. The real cause of its fall may be ascribed to the rise of piracy in the Indian seas and this indirectly led to the rise of the port of Barygaza for the time being.

Calliena under diverse forms, appears in several Kānheri Buddhist cave inscriptions of which four (Lüd. Nos. 998, 1000,1001 and 1024), record gifts by merchants or their sons,

while one (No. 986) records the gift by a goldsmith Samidata and another (1032) by a blacksmith Nada. There are two Junnar inscriptions also, one (1179) recording the gift by Sulasadata, the son of Hēraṇika (a treasurer) and another (1177) by a goldsmith Saghaka, son of Kulīra of Kalyana. These inscriptions mentioning so many merchants, smiths and artisans and their gifts, indicate the heydey of Calliena in her economic life.

Ptolemy has failed to notice this port and has placed 'Dounga' immediately after Soupara.[41] It is not unlikely that Ptolemy, who was more careful to make his account upto-date saw that the port of Kalyana had by his time fallen into insignificance. The lists of the Milindapañha and of the Niddesa, which have much in common with the Ptolemy's Geographike as pointed out by S. Levi, also make no mention of it and thus corroborate its fall. Calliena is, however, mentioned by Cosmas as "a great mart of trade, where copper is produced and sesame wood and materials for dress" are found and which is commercially connected with Ceylon. This shows the rise of this port in the sixth cent. A.D. Ptolemy mentions Dounga in between Soupara and Simylla, which the Periplus has failed to mention. This may be due to the fact that Dounga might have had its rise after the days of the author of the Periplus.

SIMYLLA:—

The Periplus[42] mentions Simylla as a market-town. Pearl-fishery is located by Pliny at Perimula (Semylla.)[43]

In the inscriptions Semylla is referred to as Cemula. A Kāneri inscription[44] records the gift of a cistern by Sulasadata, son of Róhiṇimita, the Chēmulaka; while another[45] records

41 Ptol. VII. 1. 6.
42 Peri, 53.
43 Pliny, VI. 54.
44 Lud, No. 996.
45 Lud, No. 1033.

the gift of a path by one Dhammanaka, son of Róhiṇimita the Chēmulaka. We do not know whether the Ròhiṇimita mentioned in both the texts is identical. If it is so, then Sulasadata and Dhammanaka may be regarded as brothers; or in other words in Kāṇheri we have inscriptions of only one family hailing from Cemula. The inscriptions evidently show the importance of three ports, Suppara, Kalliena and Semylla mentioned in the Periplus in order and the non-mention of other market places of the Dachinabades of the Periplus in the contemporary epigraphic records possibly shows that they were of comparatively little importance. The inscriptions evidently show the importance of three ports, Suppara, Kalliena and Semyllia mentioned in the Periplus in order and the non-mention of other market places of the Dachinabades of the Periplus in the contemporary epigraphic records possibly shows that they were of comparatively little importance. The inscriptions (Lud. Nos. 1032 and 1033) show the gifts of paths by one blacksmith and by one son of a treasurer respectively who were definitely interested in the making of paths. The donors, being members of the artisan class or of the capitalist group must have been aware of the utility of paths in the eonomic life of the land.

Semylla was of special interest to Ptolemy[45a] who had gathered much information about the geography of West India from men who traded to this place, who had been there for many years and brought many new things to him. Ptolemy speaks of it as a point and emporium. It has been identified with modern Chaul. Recently a village Chambur on Trombay island in Bombay harbour has been brought to ours notice and has naturally created a doubt as to whether the old trade centre was at Chaul or Chambur. The following reasons may be put forward for showing that Chaul and not Chimula was the Greek Semylla. It is somewhat unlikely that two places, so close and so completely on the same line

45a Ptolemy. VII. 1. 6.

of traffic as Kalyan and Chimula should have flourished at the same time. Second, the mention of Semulla as one of other local marts bellow Calliena in the Periplus, points to some place down the coast rather than to a town in the same harbour as Calliena, which according to the author's order 'north to south,' should have been mentioned before it. Besides, if the town was Chambur in Trombay, Ptolemy's point ("promontorium of Semylla") loses its significance.

From Ptolemy we learn that Simylla was no longer a local mart but a legal emporium. During the second century A.D. it gained more importance than in the days of author of the Periplus, most probably because of its cotton-trade with the then world.[46]

Next to Simylla, Ptolemy[47] mentions Hippokoura in Ariake Sadinon, which has been identified with Choḍabandar (horse-port) by Pt. B. Indraji but .Mr. Cambell suggests its identity with "Choregaon (horse-village) in Kolaba, a place at the head of a navigable river which was once a seat of trade.[48] The Periplus does not mention it and it may not be unlikely that it rose to prominence after the period of the Periplus.

MANDAGORA (mod. Mandad):— Periplus mentions it just after Semylla.[49] Ptolemy also mentions it in the Ariake of the Pirates.[50] Schoff notes that "the port is closed during

46 Cf. Warmington, p. 112.

47 Ptol, VII. 1. 6

48 Cf. McCrindle, p. 44. Ptolemy speaks of another town of the same name, inland in the southern part of Ariake to the south of Paithan and Tagara and to the north of Banaousei. (VII. 1. 83). This inland town was "the royal seat of Baleokouros". Its equation with mod. Kolhapur region appears to be almost certain. The name of the town appears to be a Greek rendering of the word signifying the town of Sada (horse). The coins with the inscriptions i) Rano Vasithiputasa Vilivayakurasa, ii) Rano Madhariputasa Sivalakaura and iii) Rano Gotamiputasa Vilivayakurasa show that these kings ruled in the order in which they are placed here. Cf. Pre-Aryan and Pre-Dravidian by Dr. P. C. Bagchi. p. 174.

49 Peri. 53.

50 Ptol, VII. 1. 7.

the south-west monsoon. It is now a fishing village of no importance, but in former times it was a great centre of trade in teak and blackwood and for ship-building.[51] Rawlinson identifies this port with Bankot.[52]

It is curious to note that the Periplus places Mandagora first and then Palaipatmai; whereas Ptolemy has reversed their positions.

PALAIPATMAE :- (most probably Dābhol or Pāripatana).[53]

It is evidently identical with Baltipatna of Ptolemy. Yule locates it as Daibal. It is of great historical interest, being the main port of S. Konkan.[54] The name is probably Sk. 'Pāripātana.' "Pari" means coast south of the Vindhya and "Patana" means port or town.

It should be noted that there is a disagreement between the lists of ports given in the Periplus and Ptolemy's Geographike. The Periplus mentions Melizigara[55] between Palaipatmai and Byzantion and V. Smith equates this with Jaygadh or Sidi, perhaps the Sigerus of Pliny ;[56] whereas Ptolemy mentions Melizegyris as an island about 20 miles south of Simylla. Melizegyris suggests 'Malayagiri' in sanskrit and appears in the Male of Cosmas. Melizigara of the Periplus or Sigerus is described as an important port by Pliny but it is not mentioned in the Geographike as such, which again is altogether silent regarding Togarum and Aurannobsas of the Periplus. The greatest difference between the accounts of the Periplus and Ptolemy lies in the fact that the former mentions 11 marts in the Dachinabades (9 mentioned already + Paethana +Tagara), whereas the latter speaks of only two marts in the region, Simylla and Nitrias. This proves conclusively that

51 Cf. Imp. Gaz., VI. 383; Schoff. p. 201.
52 Rawlinson, Ind. & W. World, p. 119.
53 Rawlinson, p. 119.
54 S. N. Majumdar - Notes on Ptolemy, (McCr.) p. 347.
55 Peri, 53.
56 Pliny VI. CXXVI. 100

trade in the Ariake region had definitely declined in the 2nd cent. A.D.

(IV)

KANARESE SPEAKING AREA.

To turn now to the Kanarese speaking area. According to the report of the Linguistic Survey of India[57] Kanarese is the principal language of Mysore and the districts of Coimbatore, Salem, Anantapur and Bellary, of part of the Satora area of the Bombay Presidency and almost upto Kolapur. It is the official language of North Kanara and the main dialect of South Kanara.

Kanara is probably derived from the Dravidian word Karnādu=Kan-nālu, black country which is the same as Karṇāṭa in sanskrit. Karnāṭa is first mentioned in the Birur grant of Visṇuvarman,[58] where its capital (tilaka) Vaijayantī is also mentioned. According to Tamil works Karnādu formed a part of Tamilakam or Drāvida. Kanarese is, according to the Linguistic Survey, grouped under the Dravidian languages. The Jayamangalā Commentary on Vātsyāyana's Kāmasūtra[59] refers to Karnāta to the north of Drāviḍa. ("Karṇāṭa-viṣayād dakṣiṇena Drāvidaviṣayaḥ")

BYZANTIUM:

It is mentioned after Melizeigara in the Periplus and after Mandagora in Ptolemy. S. N. Majumdar thinks, like Rawlinson, that it is "probably the modern Vizadrog described as one of the best harbours on the western coast.[60]

Byzantium (mod. Vizādrog) is also known as Vaijayantī in the inscriptions and in the Janapada Banaoasei of Ptolemy.

57 Ling. Surv. Ind, Vol. IV, pp. 362-3.
58 Ep. Carn, Vol. VI, p. 91f.
59 Kāmasūtra, p. 127.
60 Ptol. p. 348. Cf. Rawlinson, p. 119.

The Mahāvaṃsa[61] mentions Wanawasi, a city or a district where Rakkhita was deputed in the 3rd cent. B.C. The country of Banavasi[62] is equated with modern North Canara. The country is again described as Kuntala country with an ornament of Banavasi in a record of 1077 in Ep. Carn. VIII. SI. 262. Vaijayantī, identified with Banavasi has been described as a tilaka, as already mentioned.

We learn of the southern expedition of Gautamiputra who seems to have encamped at Vaijayantī from the Nāsik inscription,[63] though there is no reason to believe that it became a part of his dominion. It became later the capital of the Cutu-Sātakarṇis[64] and after them, of the Kadambas, who occupied it about the middle of the 4th cent. A.D. under Mayurasvāmī.

Fleet identifies Vaijayantī with the Banavāsi region. Banavāsi is mentioned in the Nāgārjunikonda inscription. Ptolemy however, seems to differentiate between the two names and the position of the two countries in the geography is as follows:—

Banabasi (116°x 14° 45′)
Byzantion (112°x 20° 14′)

From the above account it seems that Banavāsī lay to the north-east of Byzantion or Vaijayantī.[65] It is is not unlikely that originally Banavāsi and Byzantion were separate localities but later on the latter was merged in the former. The Bom. Dist. Gaz. Vol. XV. p. II. p. 264 records a local tradition, according to which Banavāsi was called Koumudi in the first cycle of the Kṛtayuga, Jayantī in the second cycle of the Tretāyuga, Bemdivi in the third cycle of Dvāparayuga and Banabāsi i.e., forest-settlement in the present cycle of Kaliyuga. Vogel

61 Mahāvaṃsa, XII. 41.
62 Bomb. Gaz, I. ii. p. 278. n. 2.
63 Ep. Ind, VIII, p. 71. Lud, 1125.
64 Ep. Carn, VII. p. 251.
65 Ep. Ind, Vol. XX, p. 8.

seems to be wrong when he identifies it with Vanavāsi, a village or a small town in the Simula district of Mysore state."

Vaijayantī is also mentioned in the Karle Buddhist inscription[66] which records the establishment of Selaghera, a most excellent one in the Jaṃbuvīpa by the Banker Bhutapāla of Vajanyantī. This establishment of a banker shows clearly the existence of bankers in the town and presupposes the prosperity of the place by trade. The Periplus (53) mentions two other marts, Togarum and Aurannoboas after Byzantium.

(V)

MALAYĀLAM SPEAKING AREA.

The Linguistic Survey[67] states: "Malayālam is spoken along the western coast from Kosargodu in the north to Trivandrum in the south. The eastern frontier is the Western Ghats and on the west the Malayālam country is bounded by the Arabian Sea. It covers the southern part of South-Canara, the whole of Malabar and Cochin, with numerous settlers in the adjoining parts of Mysore and Nilgiri and lastly the greatest part of Travancore."

According to Grierson Malayālam is the offshoot of Tamil dating from the 9th cent. A.D.[68] But the development of a language requires centuries and so when the Silappadikaram speaks of impure Tamil, we may think that Malayālam is born of that impure Tamil. This Malayālam speaking area probably contained the ancient (Kerala) Chera kingdom.

In the History of Tinnevelly Caldwell says that (p. 25) "While the Pāṇḍyas represented the Achchan-Kóvil pass as their western boundary, the Chera stanza represents the eastern boundary of the Cheras to be, not the Achchan-Kóvil pass but Tenkāsi;" and (p. 26) "Another Chera stanza

66 Lud. 1087.
67 Ling. Surv. of India, Vol. IV. I. p. 348.
68 Imp. Gaz. Vol. I. p. 380.

makes Shenkotta the western boundary of the Cheras. Shenkotta lies about due south of the Achchan-Kóvil pass, so that it would be equally suitable to be regarded as the most westerly point of the Pāṇḍya country.

It has already been stated that the Western Ghats formed the eastern boundary of the Malayālam speaking area. They are also the boundary of the Kerala country. Kālidāsa also refers to the same thing when he says that Raghu reached the Kerala country after crossing the Sahya mountain. According to the Keralotpatti, the Chera country was roughly divided into two parts; i) the Malainādu, the mountainous region owing its title to Malai meaning mountain in Tamil; and ii) the Kadalmalainādu, i.e., the region of seas and mountains, which was again divided into Kuttanādu, Kudanādu and Pulinādu and which included sometimes the Ven-nādu as well. Pulinādu means the sandy tract, probably from the Agalappula to the north of the Ponnani river. Kudanādu may be equated with the Kudamalai of the Śilappadikāram (p.182). Ven-nādu owes its name to the bamboo growing widely in the low hills and valleys lying to the south west of Travancore.

Next comes in the Satiyaputra janapada mentioned in the edicts of Asoka as a pachaṃta janapada implying thereby its position outside Asoka's dominion which extended upto the Chitraldrug district in the south. The term 'Satīrtha' (with variant reading like Satiya or Nāriya) in the Mahābhārata helps us to equate it with Satiyaputra janapada. 'Nāriya' may be taken to imply the important position of women in the society, their right of succession etc., and reminds us of a country, in which, according to a Tamil work succession was regulated through women. The Satiyaputra kingdom was evidently a colony in the Malayālam speaking area with a strong Brahmanical influence, where even today sanskrit element persists strongly in the Malayālam.

NITRA:—Nitra is mentioned in Ptolemy[69] as a "mart" but

69 Ptol. VII. 1. 7.

is conspicuously absent in the list of the Periplus. Mr. Schoff identifies it with the Nitrias of Pliny[70] and the White island (Lieuke) of the Periplus, the modern Pigeon island, also known as Nitran.[71]

It is the most southern of the pirate ports. Pliny says that ships bound for Muziris ran the risk of an attack of the pirates of Nitra. Mr. Aiyangar takes it to be the Naura of the Periplus and places it at the head of the delta of the rivers Netravati and Gurupa.[72] Naura is mentioned in the Periplus as the first market of Damirike.

NAURA:—The Periplus mentions "Naura and Tyndis, the first markets of Damirica,"[73] which may be identified with the Satiyaputra kingdom of Aśoka's inscriptions. (R. E. II). Naura being then in North Malabar, may be identfied with the modern Crannanore, which is known to have been an active port in the days of Roman trade as evidenced by the Roman coins found in India of the reigns of Tiberius, Claudius and Nero.[74] Naura of the Periplus is not found in Ptolemy and most probably it is Nitra of the latter.

TYNDIS:— Both the author of the Periplus and Ptolemy are at one in making Tyndis one of the first or most northern ports of the Deccan. The Periplus records that "Tyndis is of the kingdom of Cerobothra, it is a village in plain sight by the sea."[75] Mr. Schoff[76] locates it at Ponnani, which, according to the Imperial Gazetteer,[77] is navigable for small vessels for some distance inland. Dr. Barnell and Mr. Aiyangar[78] suggest

70 Pliny, VI. 26.
71 Cf. Schoff, p. 203.
72 Beginnings of S. I. History, pp. 230-231.
73 Peri, 53.
74 Cf. Schoff, p. 204.
75 Peri, 53.
76 Schoff, p. 204.
77 Imp. Gaz, XX. 164.
78 Begin. S. I. Hist, p. 231.

Kadalundi near Beypore. S. N. Majumdar[79] says that Tyndis stands for Dravadian Tondi.

The Periplus[80] states that Tyndis is situated near the sea at the distance of "500 stadia by river and sea from Muziris." Muziris has been equated with Cranganore[81] and 500 stadia's distance from it leads us to Tanur. According to some scholars Tanur itself might have been Tyndis.

MUZIRIS:— We come across "Murachīpattanaṃ tathā" in the Mahābhārata,[82] which was conquered by Sahadeva and it may not be unlikely that this pattana of Murachī meant the port of Muziris.

The chief ports of the west coast towards south after Tyndis were Muziris and Nelcynda. The former was in the country of Cerobothra, as already noted, while the latter was in the kingdom of Pāṇḍya or Madura. Both these ports were of "leading importance" during the period of the Periplus.

The location of Muziris has been fixed by Burnell, Caldwell and Yule at Muyiri-kotta, which as Cranganore, was an important port in mediaeval times. Their arguments stand upon the statement of the Periplus,[83] "the whole course to the end of Damirica is 7000 stadia," i.e., the distance between Barygaza and Damirica. The Periplus states that Muziris "is located on a river, distant from Tyndis by river and sea 500 stadia and up the river from shore 20 stadia. Nelcynda is distant from Muziris by river and sea about 500 stadia and is of another kingdom, the Pandian. This place is also situated on a river about 120 stadia from the sea". V. Smith[84] is also confident that Muziris and Cranganore are the same.

79 McCr. Ptol, p. 348.
80 Peri, 53.
81 Rawlinson, *Inter. bet. Ind. & W. World*, p. 120.
82 Mbh, ed. Bhandarkar, II. 28. 45.
83 Peri. 54.
84 V. Smith, *Early Hist. Ind, pp.* 340-41.

The distance between Tyndis, Muziris and Nelcynda, as stated in the Periplus confirms the position of Muziris at Cranganore, near the Cochin backwaters. The Tamil poet[85] speaks of "the thriving town of Muchiri near the mouth of the Periyar where the beautiful large ships of the Yavanas, bringing gold, come splashing the white foam on the waters of the Periyar which belongs to the Cherala and return laden with pepper." "Fish is bartared for paddy, which is brought in baskets to the houses," says another poet : "sacks of pepper are brought from the houses to the market, the gold received from ships, in exchange for articles sold, is brought to shore in barges at Muchiri, where the music of the surging sea never ceases and where Kudduvan (the Chera king) presents to visitors the rare products of the seas and mountains."[86]

Muziris, as stated in the Periplus, did "abound in ships sent there with cargoes from Arabia and by the Greeks." (54). Schoff[87] notes that "in these protected thoroughfares flourished a sea-trade, largely in native Dravidian craft, which was of early creation and of great influence in the interchange of ideas as well as commodities, not only in South India, but in the Persian Gulf, and the coasts of Arabia and Africa." The author of the Periplus must have come across ships "sent from Arabia and by the Greeks" in the Chera backwaters. V. Smith[88] also is of opinion that these places were "in touch with the outer world only through maritime commerce and the products, such as, pearls, beryls and pepper were largely sought for by foreign merchants, as early as the 7th or 8th cent. B.C.."

Muziris is also mentioned as "the nearest mart in India" by Pliny whose account is given below: "To those who are bound for India, Ocelis is the best place for embarcation.

85 Erukkaddur Thayan Kannanar Akam, 148.
86 Oaranarpuram. 343.
78 Schoff, p. 209.
88 Early Hist. Ind, p. 334.

If the wind, called Hippalus, happens to be blowing, it is possible to arrive in 40 days at the nearest mart in India, Muziris by name. This, however, is not a very desirable place for disembarcation on account of the pirates who frequent its vicinity, where they occupy a place called Nitras nor in fact is it very rich in articles of merchandise. Besides, the roadstead for shipping is a considerable distance from the shore and the cargoes have to be conveyed in boats, either for loading or discharging." It may be noted that according to Tarn, Muziris rose to prominence as a result of direct shipping from the Arabian coast to this place, as indicated by the 4th stage of Pliny's trade-routes across the Indian Ocean.

Rawlinson has rightly remarked that "Muziris was shunned by travellers on account of bad anchorage and the pirates."[89]

Pliny speaks of another port and a much more convenient one, which lies within the territory of the people, called Neacyndi, Barace by name." Barace of Pliny or Bacare of the Periplus stood on the mouth of the river on which, at a distance of 120 stadia[90] from the sea was situated the great mart Nelcynda or Nelkynda according to Ptolemy. The Periplus records the respective positions of Bacare at the mouth and of Nelcynda on the river some way up and describes the river to be "full of shoals" and the channels "not clear"[91] and states that on account of difficulty of navigation, the ships, despatched from Nelcynda, were obliged to sail down empty to Bakare and there take in their cargoes.

Nelcynda and Muziris gained prominent position in the days of the Periplus, most probably due to the blockade of the Northern Deccan coast by the ships of Barygaza and no less due to the importance of pepper trade, so that specially

89 *Inter. bet. Ind. & W. World*, p. 120.
90 Peri, 54.
91 " 55.

after the discovery of Hippalus, they eclipsed the renown of even Broach.[92] Enormous Roman coins found in this part testify to the importance of pepper trade of Nelcynda and Muziris in the first two centuries of the Christian era. Pepper, the "passion of the Yavanas" (Yavanapriya) as called in a Tamil poem frequently quoted, brought about Pliny's fourth stage of trade-routes, already mentioned (Supra p. 116 about the middle of the 1st cent. A. D.[93] The Peutinger Tables represent a temple of Augustus at Muziris.

The distance of Nelcynda from Muziris is given at about 500 stadia and this is whether the journey was made by sea or by river or by land. At a distance of 120 stadia from Nelcynda, at an inlet of the sea stood Bacare, which is nothing but Porakād "which was once a notable port but declined with the rise of Alleppey, built a few miles further north after a canal had been cut through from sea to back-water and harbour works constructed." [94]

The word Bakarei may represent the sanskrit "Dvāraka," "a door." Ptolemy has mentioned three shore towns between Muziris and Barkare;, viz., Podoperoura, (Poudopatana meaning a 'new town' of Cosmas), Semne, and Nelcynda. They were all on the land side of the backwaters. Pliny (Bk. VI) tells us that passengers preferred to embark at Barake and not at Muziris for pirates. Then it was noted for pepper-trade. But in Ptolemy's time Muziris was "the only authourised mart, Nelcyndia and Bacare having ceased to be such and Tyndis ranking as a coast town." Warmington reasons that it was due to either unauthorised activities of the Aioi in whose territory Nelcyndia was or to the recovery of that place by the Cheras who prevented all places from being legal marts except Muziris." [95]

92 Cf. Rawlinson. p. 120.
93 Cf. Pliny. VI. 101.
94 Imp. Gaz. XX. 188.
95 Warmington. p. 114.

Next to Bacare, we come across the district of 'Paralia' as stated in the Periplus, 'stretching along the coast'; where "the first place is called Balita; it has a fine harbour."[96] Balita is perhaps mod. Varkkallai. It was once "a place of considerable commercial importance. By cutting through a bluff the backwaters have recently been connected with others leading as far as Trivandrum which is now the chief port of the district."[97] Balita may be taken to represent 'Bammala' of Ptolemy.

Ptolemy mentions two other marts between Melkynda and Bammala, viz, Elangkon, a mart and Kottiara, the metropolis.[98] The former is now Quilon and the latter, says Caldwell,[99] is the name of a place in the country of the Aioi of Ptolemy and in the Paralia of the Periplus, identical with South Travancore. Kottiara is apparently the Cottara of Pliny and of the Peutinger Tables. Ptolemy calls it the Metropolis and hints at its trade activities. Pliny says that the district from which "pepper is carried down to Barace in boats hollowed out of a single tree is known as Cottonara."

(V)

Tamil Speaking Area. (Drāviḍa-deśa).

The Sanskrit author speaks of Drāviḍabhāṣā as the family of languages prevalent in the "South" only. Grierson also places it "in the south of the Indian Peninsula, as contrasted with the Aryan languages of the north."[100] The Periplus (43) speaks of "Naura and Tyndis, the first markets of Damirika." Ptolemy, however, excludes Naura from Damirika or Lymirike and assigns the northern boundary of Da-

96 Peri. 58.
97 Schoff. p. 234.
98 Ptol. VII. 1. 9.
99 *Dravidian Grammar* .Introd. p. 8.
100 *Ling. Surv. Ind. Vol.* I. p. 82.

mirike near Tyndis, described in the Periplus "as of the kingdom of Cherabothra."

The Śilappadhikāram[101] says of "the fertile Tamil country, bounded on the north by the Tirupati hills sacred to Viṣṇu and in the south by the Kumārī sea, having for its capitals ... Madura, Vañji and Puhār ...." Thus the Tamil epic shows that South India south of Tirupati was known as Tamilakam, divided into two parts, pure and impure. Though nothing is mentioned as the distinct feature of pure Tamil, it seems probable that it was that part, i.e. the eastern and central parts where unmixed Tamil was spoken and where even today Tamil is being spoken; and elsewhere we have Malayālam and Kanarese which may be regarded as the offshoots of Tamil. According to the Census report of India, 1921, Vol. XIII, Tamil is still the main language of the Madras Presidency.

According to Senavaraiyar and Nacchinarkiniyar the Sena (pure) Tamil speaking area was bounded by the river Vaigāi in the south, the river Marudam in the north, Karuvur (= Vañji in the Trichinopoly dist.) in the west and Maruvur in the east. This shows that the Tinnevelly region which formed an important part of the Pāṇḍya kingdom was placed as late as this work outside the pure Tamil speaking area.

It has already been pointed out that Karuvur-Vañji was the western limit of the Sena Tamil area. Hence the original Kerala kingdom lying to the west of the Western Ghats must be taken to be outside the zone of the Sena Tamil. But the Sena Tamil area reached upto the sea in the east, as Maruvur (or Maruvurpākkam, the Suburb of Kaveripadinam) had been fixed as the eastern limit.

Caldwell in his History of Tinnevelly[102] says. "The Tamil people were divided in ancient times into three great divisions, the chēras, the chólas and the Päṇḍyas. The arrange-

101 Silappadhikāram. ed. Dikshitar. p. 145.
102 Hist. Tinnevelly. p. 12.

ment of the names is climatic, and denotes that the Pāṇḍyas were supposed in ancient times to have the pre-eminence .... according to the Tamil legends Chēran, Chólan and Pàṇḍyan were three brothers who at first lived and ruled in common at Korkai near the mouth of the Tāmraparṇī. Eventually a separation took place. Pāṇḍyan remained at home. Chēran and Chólan went forth to seek their fortunes and founded kingdoms of their own to north and west. We have a similar representation, perhaps merely an echo of the Tamil tradition in the Harivamśa and several Purāṇas in which Pāṇḍya, Kerala, Kóla and Chòla are represented as the four sons of Ākrīḍa or of Dushyanta. Who the kóla referred to here was is not clear. Kòla is said to be identified by the Kerala-Māhātmya with Kolam or Kòlattunāḍu, north Malabar." He adds elsewhere[103] that "the area of each of the Tamil countries is represented in the various stanzas as follows:— the Chera country 800 miles, Chola 240 and Pāṇḍya 560."

It has already been pointed out that Chola was Sen Tamil, i.e., the purest of the Tamil Janapadas. The Mahāvaṃśa refers to the Damilas, people of the Chola country invading Lankā.[104] Chola originally comprised the districts of Trichinopoly and Tanjore, and is mentioned in Aśoka's edicts as lying outside his empire. The Hāthigumpha inscription of Khāravela mentions the king of Pāṇḍya ("Pāṇḍa-rājā (ābharaṇāni) muta-mani-ratanāni āharāpayati") but not Chola. The country of Pāṇḍya has been pointed out to be located in the extreme south and south of the Chola region, we may reasonably infer that Khāravela had to pass through the Chola country to the Pāṇḍya country. Dr. Barua once interpreted the line, ".... Tathā cavuthe vase vijadharādhivāsam A (raka) tapuraṃ .... pasāsa (yati) . .." so as to show Khāravela's rule over Arakatapura inhabited by the Vidyādharas,[105]

103 Hist. Tinnevelly p. 26.
104 *Mahāvaṃśa*, p. 166. 197f.
105 *Old Brāhmī Ins. in the Udaya-and Khaṇḍagiri caves, p.* 13.

which may be equated with Ptolemy's Arkatos, capital of Sora.[106] Arkatos may be generally taken to be modern Arkot region. Thus it is clear that the Chola country extended at least upto the Arkot area. Tamil literature also speaks of Karikala trying to civilise the nomad Sorai.[107] Ptolemy speaks of the coast country of the Soringai with its capital at Orthoura ruled by Sornagos. (fig. 91), This country is the same as the coast country of the Periplus and the sanskrit Cholamandal.

We have already pointed out that the Tinnevelly region, the ancient Janapada of the Pāṇḍyas was outside the zone of Sen Tamil. The edicts of Aśoka and the Khāravela inscription make a mention of the Pāṇḍyas who seem to have been originally established in the extreme south near Cape Comorin. According to the Saṅgam works the earliest Pandion capital, when swallowed up by the sea was shifted to Korkai. The Śilappadikāram may be cited to point at the washing away of the southern portion of the Pāṇḍion kingdom by the sea:' "Long live the Tennavan, the ruler of the southern region, ..., who once showed his prowess to other kings by standing on the shore of the sea."[108]

Caldwell in his History of Tinnevelly,[109] says that "according to the Tamil works, relating to the Pāṇḍya kingdom its boundaries were the river Vellāru to the north, Kumārī to the south, the sea to the east and the 'great highway' to the west. The river Vellāru which is represented in the Pāṇḍya stanzas as the northern boundary of the Pāṇḍya country, is also described as the southern boundary of the Chola country in the Chola stanzas. This Vellāru is not the Vellāru which falls into the sea near Porto Novo, for this would exclude the Cholas from Tanjore, the most valuable portion

106 Ptol, VII, 1. 68.
107 N. K. Śāstrī. The Cholas. Vol. I. p. 32.
108 Śilappadikāram, p. 171 ff.
109 Hist. of Tinnevelly, p. 24.

of their dominions. This Vellaru rises in the hills near Marungāpuri in the Trichinopoly district, takes a S. E. course through the native state of Poducotta and falls into the sea in Palk Strait. This identification of the Vellāru is confirmed by the circumstance that it was an old custom prevalent among the Nāṭṭukkòṭṭai Cheṭṭis that their women should never be allowed to cross the Veḷḷāru, it being considered as an act of bad omen for women to cross boundaries."

Compared with the west coast, the east coast of India had considerably a lesser number of ports during the first few centuries of the Christian era. Both the Periplus and Ptolemy show a very limited number of ports or marts on the east coast, whereas the west coast was enriched with a far greater number of ports and marts, almost all of them having far greater importance, connecting themselves with the western world. Barygaza and Muziris became the most important centres of trade between India and the rest of the world.

The Periplus mentions only marts and harbours like Camara, Poduca and Sopatma which traded coastwise, as far as Damirica and sent ships to "Chryse and the Ganges.[110] Ptolemy also mentions "the point of departure (apheterion) for ships bound for Chryse."[111] Of course, Kaveri and Poduca served as important ports for commercial transaction with the western world as well. But most of the ports of E. coast traded with the eastern world, i.e., South-east Asia.

KORKOI:—

Beyond Balita "there is another place called Comari"[112] i.e., Korkai. Dr. Caldwell[113] remarks that "it would seem probable that at Korkai was formed the first settlement of

110 Peri. 60.
111 Ptolemy, VII. 1. 15.
112 Peri, 58.
113 Hist. of Tinnevelly, (1881) p. 9.

civilised men in Tinnevelly." He opines that the Aryans who had settled in Ceylon under Vijaya might have subsequently planted colonies in the Tinnevelly coast and given the chief river on the coast the name of the town from which they had come.[114] He also refers to the Tamil tradition that the three brothers already mentioned had originally ruled in common at Korkai[115]

The Mahābhārata[116] states that the region of Kanyātīrtha was conquered by Sahadeva. The Rāmāyaṇa notes that at this place, Hanumān took his jump across the sea from the Mahendragiri mountain to Ceylon. The Periplus [117] mentions "a harbour at Comari," and also its importance as a pilgrimage[118] and as a field for pearl-fisheries.

Dr. Caldwell thinks that the embassy sent by the Indian king to Augustus, referred to by Strabo, went from Pandion (and not from Porus) and hence the trade-relation between the Romans and the Pandions at Korkai is indicated.

Korkai is one of the few places of India, found in the 'Peutingar Tables' in the name of 'Coleis Indorum,' the Coleis of the Indians.

The Śilappadikāram[119] mentions it as "one of the great ports of the time. It was also noted for excellent pearl-fisheries.[120] Ptolemy also calls it "a cape and town."[12] According to the Imperial Gazette[122] Kumārī is" one of the most important places of pilgrimage in S. India."

Dr. Caldwell who carried out stray excavations in 1877,

114 Hist. of Tinnevelly, p. 10.
115 " " " p. 12.
116 Mbh, II. 28. 49.
117 Peri, 58.
118 Cf. Msh. (H. D. Siddhānta, ed.) III. 67. 100 and ed Bhandarkar, III. 81. 94.
119 Silappa, ed. Dikshitar, p. 202.
120 Meduraikkanji, II. 134 & 144.
121 Ptol, VII. 1. 10-11.
122 Imp. Gaz, X. 376.

found sea-shells in great abundance in the delta of the Tāṃraparṇī river. He observes:— "The ancient habitations could be traced only at a depth of 8 ft. below the present level and whenever this was reached, traces of human occupation were found in the shape of sherds of Indian pottery etc. When I inspected the site in 1936, I found quantities of conch-shells, some of which are cut or sawn, thus lending support to the fact that hereabout lay an ancient chank-factory manufacturing shell-ornaments such as bangles, rings, beads etc, specimens of which obtained locally are illustrated here.[123]

Kolkai, derived probably from the Tamil root kol- 'to buy,' speaks of its importance as an emporium in the period of the Tamil epics. Kolkai is identified by some scholars with 'Kabāṭapuraṃ' of the sanskrit literature. Kapāṭapuraṃ or Pāṇḍya-kabāṭaṃ is mentioned in the Arthaśāstra as a place[124] where pearls can be obtained, which shows that it was on the sea and thus may be identified with Colchi of the Periplus, the pearl-fishery of which was worked by condemned criminals. The Rāmāyaṇa[125] also refers to "yuktaṃ kabāṭaṃ pāṇḍyānāṃ," while the Great epic[126] speaks of "bhinne kabāte Pāṇḍyānāṃ" and states that Krishṇa slew there the Pandian king. The meaning of the term 'kapāṭa' or 'kabāṭa' has sometimes caused a difficulty. Instead of taking, "Ayaṃ kābate nijaghāna Pāṇḍyaṃ" Nīlakaṇṭha adopts the reading— "Kapātena jaghāna" and interprets "Kaeāṭp" as 'bakshastaṭa' (Mbh. 5. 48. 76). The Southern editions read 'kabāṭe nijaghāna' and the Gloss interpretes 'kabāṭa' as 'nagara-bheda,' a particular town. The Southern reading here seems to be more probable than that adopted by Nīlakaṇṭha for the comparison of the Arthaśāstra, the Rāmāyaṇa and the Mahābhārata shows that 'kabāṭa' or 'kapāṭa' must undoubtedly refer to a town or a locality in the Pāṇḍya country.

123 Plate XXX. VIII. d; Cf. A.S.I.R. 1936-37, p. 64.
124 Pāṇḍyakabāṭaṃ cha mauktikam Bk. II. XI. 76.
125 *Rāmā.* 4. 41. 19.
126 *Mbh,* VII. 23. 1,016 (ed. Calcutta) or VII. 22. 69. (P.T.).

"Beyond Colchi there follows another district called the coast country, which lies on a bay and has a region inland called Argaru." This coast-country is the Chola kingdom, which the Periplus describes as the largest kingdom and most prosperous of the three Tamil states. It was called 'Soli' by the Ceylonese. The boundary of this was from the Penner river on the north to the Vaigai on the south. The Periplus states that "at this place, and nowhere else, are bought the pearls gathered on the coast thereabouts and from there are exported muslins, those called Argaritic."[127] The pearl-fisheries of this state, the product of which was sold by one at the capital Uraiūr (Argaru of the Periplus) were those of the Palk strait, north of Adam's bridge; whereas those of the Gulf of Manar belonged to the state of Pāṇḍya and were administered from Madura. The textile industry of Uraiyūr has been famous from early times. The finest fabrics must have reached the markets of some from this kingdom of Chola. Ptolemy speaks of the Orgalic gulf lying beyond the kolkhic gulf, from which it is separated by the island of of Rāmeśwaraṃ and the string of shoals and small islands which connect Ceylon with the mainland. The gulf derives its name from Argalon, (Argaru) lying inland and celebrated for pearls and muslin. Argaru of the Periplus corresponds with Ptolemy's Argeirou, a town.

The order of the position of the countries on the East coast, as recorded in Ptolemy's Geography VII. I. may be put here:--

(1) Country of the Pandionoi (Pāṇḍyas) with its capital at Modoura (Madura) - fig. 89. - "the royal seat of Pandion."

(2) Country of the Batoi with Nikama as its Metropolis, and with Kouroula, a town. fig. 12.

(3) The Paralia of the Soretai (Cholas) with its capital

127 Peri. 59.

at Orthoura, ruled by Sorrnagos. fig. 91. and with khaberis and Sabouras as emporiums. fig. 13.

(4) Arvarnoi with Malanga, "the royal city of Basarona gos." fiig. 92. and with Poduke and Melange as emporiums and Manarpha as a mart. fiig. 14.

(5) Maisolia (Masalia in the Periplus) with its metropolis at Pityndra and with Allosygne as a "mart" and as the point of departure for ships bound for Chryse." fiig. 93.

It is clear that the countries are mentioned in Ptolemy from the south to the north. Ptolemy's "coast of the Soringoi" is evidently the "coast country" of the Periplus, which appears to be the Chola-maṇḍala of Sanskrit literature. Its capital Orthoura appears to be the same as Argaru of the Periplus (mod. Uraiyur). But Ptolemy mentions Argoru as belonging to the Pāṇḍya country, whereas the Periplus places it in the coast country (Chola), beyond the kingdom of Pandion. Ptolemy's Argarou is clearly the same as the Uragapura of Kālidāsa.[128] The Periplus speaks of "a region called Argaru but Ptolemy places it on the sea-shore and hence Uragapura of these two Greek authors is evidently different

It is interesting to note that 'the coast country' of the Periplus (i.e., Chola-maṇḍal) was possibly by the Pāṇḍya country in the south and by Masalia (the Masuli district) in the north and was ruled by one king only; whereas Ptolemy mentions Arouarnoi in between the Chola maṇḍala and Masulipatam. Dr. S. K. Aiyangar speaks of the division of Aruvanādu between the south Pennar and the northern Pennar.[129] This Aruvanādu (Kāñchī-maṇḍala) may be safely equated with Arouarnoi of Ptolemy. This leads us to assume that the Chola-maṇḍala was divided into two kingdoms with two royal seats in the age of Ptolemy. (Nos. 3 & 4 mentioned above).

128 *Raghu,* VI. 59-60.
129 R. Gopalan, *Pallavas of Kāñchī*, p. xi-ii.

PUHĀR:—

The city of Puhār seems to have attained great celebrity from very early times under the name of Kākandi[130] and from this place a nun Somā is recorded to have made a gift in the Barhut inscription[131] of the 2nd cent. B. C.. The Milindapañho mentions Kola-pattana which must be, according to Rhys Davids,[132] some place on the Coromandal coast. N. K. Śāstri says that "most probably this is a reference to Kāvēripaṭṭinam.[133] In the Jātaka story Akitti is described as leaving Benares for a garden near Kaveripaṭṭina. The Mahāvaṃśa tells us how a Damila of noble birth, Elāra by name came to Ceylon from the Chola country and gradually established his rule there, about the middle of the 2nd cent. B.C.. Hence as early as the 2nd cent. B. C. Kaveripattan must have risen to prominence and to have linked herself with Bharhut and Benares on the north and Ceylon on the south.

The Periplus[134] mentions the most important market-towns and harbours of the coast-country, three in order from the south, "first camara, then Poduca, then Sopatma," and states that "ships put in there from Damirica and from the north". It records the existence of "ships of a country coasting along the shore as far as Damirica "and also of" other very large vessels, called Sangara and Colandia." It adds that "there are imported into these places everything made in Damirica and the greatest part of things brought from Egypt."

Ptolemy mentions "Khaberis, an emporium" at the mouth of the river Khaberos, which is the Kāverī, Ptolemy's fixation of its longitude as 128°30′ is definitely wrong as his configura-

130 Maṇimēkalai, xxii. 1. 37.
131 Lud, No. 817.
132 S.B.E., i. p. xliv. and ii. p. 269.
133 The Cholas, p. 32.
134 Peri., 60.

tion of the eastern coast is as erroneous as that of the west coast.

Dr. Burnell identified Khaberis with Kaveripattam,[135] which lies a little to the north of Tranquebar at the mouth of the Pudu-Kaveri.

Schoff (Cf. p. 242) opines that "Ptolemy's Khaberis emporium and the Camara of the Periplus were nearly, if not quite, identical with the modern Karikal (79° 50′ E, 10° 55′ N).

The description of Kāvēripaṭṭaṇam is equally interesting. "It was built on the northern bank of the Kāverī river, then a broad and deep stream, into which heavily laden ships entered from the sea without slacking sail. The town was divided into 2 parts, one of which, Maruvarapakkam, adjoined the sea-coast. Near the beach in Maruvarapakkam were raised platforms and godowns and warehouses where the goods landed from ships were stored. Here the goods were stamped with the Tiger stamp (the emblem of the Chola kings) after payment of customs duty and passed on to merchants' warehouses.[136]

"Close by were the settlements of the Yavana merchants, where many attractive articles were always exposed for sale. Here were also the quarters of foreign traders who had come from beyond the seas and spoke various tongues. Vendors of fragrant pastes and powders, of flowers and incense, tailors who worked on silk, wool or cotton, traders in sandal, aghil, coral, pearl, gold and precious stones, grain-merchants, washerman, dealers in fish and salt, butchers, blacksmiths, carpenters, coppersmiths, painters, sculptors, goldsmiths, coblers and toymakers, —all had their habitation in Maruvarpakkam. (Śilappadikāram, ed. Dikshitar, p.98.)

135 *Indian Antiquary*, Vol. VII, p. 40.
136 *Paddinappalai*, pp. 134-136.

Another description[137] of the markets of Kāvēripaṭṭiṇam is as such:— "Horses were brought from distant lands beyond the seas; pepper was brought in ships, gold and precious stones came from the northern mountains, sandal and aghil came from the mountains towards the west, pearls from the southern seas and coral from the eastern seas. The produce of the regions watered by the Ganges, all that is grown on the banks of the Kaveri, articles of food from Elam or Ceylon and the manufactures of Kalakam" (Burma) were brought to the markets of Kāvēripaṭṭiṇam.

"In different places of Puhār the onlooker's attention was arrested by the sight of the abodes of Yavanas whose prosperity was never on the wane. On the harbour were to be seen sailors, come from distant lands, men of different nationalities engaged in maritime commercial ventures were seen in a city, but for all appearance they lived as one community." (Śilappa. ed. Dikshitar, p. 110.)

The Maṇimekalai[138] describes different streets of the city, some ones peopled over with hawkers selling paints, powders, flowers etc., some others with weavers, expert in silk, wool and cotton fabrics and furs, known as Kārukas." Whole streets were full of silks, corals, sandal and myrrh, besides a wealth or rare ornaments, perfect pearls, gems and gold which were beyond reckoning." (Śila-Dikshitar, p. 110-11.) The epic[139] describes the King's Street, the car street, the bazar street, the broad highway with highborn merchants living on either side in the turreted houses, the Brahman street, the streets of physicians and astrologers respectively.[140]

The Śilappadikāram[141] lets us know how Kovalaṇ and Mādavi entered into the central highway of the city (Bk. VI.

137 *Paddinappalai,* 1-40.
138 *Maṇimekalai,* canto. 2. 1. 29.
139 *Maṇimekalai,* IV. 11, 37-38.
140 *Śilappadikāram,* ed. Dikshitar, p. 111
141 *Śilapp,* ed. Dikshitar, pp. 127-128.

128-144), rich with the wealth of sea-borne goods and reached the Cheri regions on the sea-shore where the flags on high seemed to say; "In these stretches of white sand can be seen different kinds of goods, brought in ships by foreign merchants who have settled here." It speaks of" beacon-lights created to guide ships on the sea-shore," showing the existence of the lighthouses and a large volume of sea-trade.[142]

Puhār was noted for sugar-cane and corals of great value, as the epic speaks of "maidens of Puhār" pounding "valuable pearls using sweet sugarcane as their pestles."[143]

Boatbuilding as an industry was in good practice here. Rafts of logs were also not uncommon. The epic speaks of "landing stages where different boats were moored, some shaped like horses, some like elephants and some others like lions."[144]

"Spinning and weaving of cotton and perhaps also of silk had attained a high degree of perfection. Spinning was then a by-occupation of women."[145] The weaving of complex patterns on cloth and silk is referred to in Tamil literature and the Periplus records that Uraiyur was a great centre of trade in fine cotton-stuffs. (59). The Porunarāṟṟuppaḍai[146] mentions "cotton-cloth, thin like the slough of a snake, bearing fine floral designs and so finely woven that the eye can not follow the course of the yarn." "The same poem[147] alludes elsewhere to silk-cloth with its threads gathered in small knots at its ends" The Maṇimēkalai[148] speaks of artistic patterns of cloth giving evidence of the marvellous dexterity of the expert weavers. Cotton and silk-trade must have been the occupation of a large section of the people.

142 " Bk. VI. 127-144. 143. Śila. Bk. XXIX. Dik. p. 335.
144 *Śila*, Bk. XIII. 174-180.
145 *Puṟam*, 125. 1. 1. Cf. The Cholas by N. K. Śāstrī, p. 107.
146 *Porunar*, II. 82-83; The Cholas, p. 107.
147 " I. 155; The Cholas, p. 107.
148 *Moṇimēkalai*, iii. 167-8.

Paddy was accepted as a means of exchange and much of inland trade was carried on by barter. Salt was sold for paddy. Honey and roots were exchanged for fish-oil and toddy and sweet sugarcane for vension.[149] Paṭṭinappālai[150] speaks of traders' moral at Puhār:—"They shunned murder and put aside theft, pleased the gods by fire offerings, raised good cows and bulls, spread the glory of the Brahmins, gave (their guests) sweets to eat and food-stuffs raw; in these ways was their kindly life filled with endless good deeds."

The importance of Puhār was not long-lived. Anticipating the forthcoming destruction of the city, the Būta at the Butacatukkam was removed to Venji by the Chera king.[151] The destruction of Puhār by the erosion of the sea was effected during the period between the time when Maṇimekalai left Puhār on a tour to Maṇipallavam and other places and her return after nearly five years. This was probably in 170 A. D. "(Intro, to Śila - by Dikshitar-p. 32).

PODUCA:—

Poduca or Podouke, mentioned in the Periplus and Ptolemy respectively may be identified with mod. Pondicherry. It must be somewhere to the north of Puhar. Poduca is also known by Arikāmeḍu in the later days. There is a site of the mound or mēḍu, the remains of brick-buildings just near a little village of Kākkāyantoppu, whicsh is still known as Arikāmeḍu meaning "mound of ruins" (arukku = to ruin). Arikāmeḍu represents the site of a considerable buried town on the Coromandel coast. It was an Indo-Roman trading station. R.E.M. Wheeler[152] discovered some Roman pottery types at this place in 1945, and established the fact that the monsoon trade between the Mediterranean world and western India with a coastwise or over-land extension to the Coromandel coast was regularly carried on as early as C. 30 A.D..

149 *Porunar,* II. 214-217.
150 *Paṭṭinappālai-.* II. 199-212.
151 *Śila,* canto. XXVIII. 11. 147-8.
152 *Ancient India.* No. 2. p. 19.

"Two sectors (northern and southern), excavated in 1945 were found to have been occupied in the 1st & 2nd centuries A.D. and to have been extensively dispoiled for bricks in the middle ages and later."[153] Tanks and courtyards excavated were once most probably used for the making of muslin cloth which, as the Periplus (59) records, must have been an important product of S. India to be exported from here. Mr. Wheeler adds,[154] "Among other industries of the town was that of beadmaking. Gold, semi-precious stones and glass were used for this purpose and two gems, curved with intaglio designs by Graeco-Roman gemcutters and in one instance untrimmed, suggest the presence of western craftsmen on the site." Numerous sherds of Italian pottery of the 1st cent. B. C. and of the 1st cent. A. D. and of amphorae, characteristic of the Mediterranean wine-trade of the period and Roman lamps and glaşsware prove that Arikāmeḍu was a Graeco-Roman colony in the beginning of the Christian era. Here the western traders settled under the formal agreement of Indian rulers and were visited by convoys of deep-sea merchantmen. Some of the Romon coin-hoards far from the sea bear an indirect testimony to the penetration of earlier western traders in the interior of S. India.

Warmington conjecturs that the full use of the monsoon and the opening of the direct route from the Red Sea to the Malabar coast was introduced "soon after 41 A. D." But archaeology indicates an earlier date. We may infer that as early as 30 A. D. a Roman emporium was founded near Pondichery. The consolidation and gradual development oof Roman trade with the east was the product of the unification of the western world under Augustus. Before Augustus Indo-Roman trade was of a spasmodic type and it was not at all adequate enough for the regular supply of amphoree at Arikameḍu. Hence we may infer that the Roman colonisation at this place was also the product of Augustus' ambition.

153 Wheeler, *Anc. Ind. Bulletin of A.S.I.* No. 2. July, 1946.
154 " " " " " p. 17.

Arrentine pottery ceased to flow to India after 50 A. D. The literary record, however shows the regular trade between India and Rome even after this time. Even when arrentine pottery stopped its import, Arikamedu was still continuing to be occupied by the Romans. Sherds of amphorae of Mediterranean type and fabric were unearthed after the excavation of the sites. The vessels were used for wine or oil. In the Tamil poem we learn of a Pāṇḍya prince exhorted to drink the cool and fragrant wines brought by the Yavanas in their vessels.[155] This speaks in clear-cut terms that wine was imported to India from the West, "Many sherds of amphora from Arikamedu preserve an internal incrustation, which, on analysis, is found to contain resin, a common constituent of mediterranean wine." The Arikamedu amphorae represent no doubt the maritime trade. Pillar-moulded bowls originated apparently in Italy and spread throughout the Roman world from the end of the 1st cent. B. C. to that of the 1st cent. A. D.. Fragments of 4 or 5 similar bowls were found out at Arikamedu by the French excavators.

Prof. N. K. Śāstrī[156] points out that "the objects found at Arikamedu have a striking resemblance with others discovered at Oceo, a maritime city of Siam connected by canal" to a port once on the littoral of the east coast of the gulf of Siam". The trading station at Arikamedu flourished between 23 B. C. and 200 A. C. and Oceo commanded a large sea trade towards the end of the period or a little later preponderantly in imports from India or brought over by Indians." Sir Roland Braddell[157] also says that merchants from India settled at Oceo and it may not be unlikely that they came from the ports of S. India, as suggested by Prof. N. K. Śāstri.

155 K. Pillai, "The Tamils 1800 years ago, pp. 12, and 37.; Aiyangar, op. cit. p. 312.

156 Indo-Asian Culture, Vol. I, No. 1, 1952, p. 45.

157 Cf. J.M.B.R.A.S., XXIV. 3, p. 156.

SOPATMA:—This port is mentioned in the Periplus (60) among the market-towns of the coast country and the harbours, where ships put in from Damirica and from the north. It is the third in order, next to Poduca. The author of the Periplus finds it frequented by "ships of the country coasting along the shore as far as Damirica" and by other very large ships called Sangara and Colandia, "which make the voyage to Chryse and to the Ganges." This record proves that Sopatma was a good port and mart, commercially connected with the countries of the entire east coast and also with the Gangetic area and Chryse in the 1st cent. A.D. . It is probably 'Supatana,' mod. Madras.[158]

(vi)

Telegu Speaking Area.

According to the *Linguistic Survey Report*[159] "the Telegu country is bounded towards the east by the Bay of Bengal from Barwa in the Ganjam dist. in the north to near Madras in the south. From Barwa the frontier line goes westwards through Ganjam to the Eastern Ghats and then south-westwards crosses the Sabari on the border of the Sunkam and Bijji Taluks in the state of Bastar and thence runs .... to the Indrāvatī. It follows this river to its confluence with the Godāvarī and thence runs to Chanda ..... It then turns southwards to the Godāvarī at its confluence with the Manjīrā and thence further south towards Bidar, where Telegu meets with Kanarese. ... The Telegu country further occupies the N. E. edge of Bellary, the greater eastern part of Anantapur and the eastern corner of Mysore. Through North Arcot and Chingleput the border line thence runs back to the sea."

It is difficult to say what was the extent of the Telegu or

158 Cf. Schoff, p. 242.
159 *Ling Surv. Rep,* Vol. IV. p. 577.

Andhra speaking area in the ancient days. The Srirangam Plate of 1358 A. D. shows that the Telegu country reached Kānyakubja in the north—"Avāgudak Pāṇḍyaka-Kānyakubjau."[160] Here the Plate probably means to say that the Andhra empire reached the dominion of the ruler of Kānyakubja; for Kānyakubja here cannot be the capital of Kanauj. The empire of Kānyakubja, though no longer a political unit in the 14th cent. A. D., was possibly still a social and geographical unit.[161].

Pliny speaks of the Andarae, a very powerful race having many villages and thirty towns well-guarded by walls and towers.[162] The Andhra kingdom, as reported above, with thirty towns and numerous villages and a great population must have had a giagantic shape. Aśoka's edicts mention Bhoja-Petinikas and the Raṭhika-Petinikas occupying the central Deccan. Hence the Andhra must be taken to occupy the area south of the Vindhyas and east of the Eastern Ghats corresponding to portions of the present C. P., Orissa and Madras. The Rāmāyaṇa locates the Andhra country on the Godāvarī and associates with Chola, Pāṇḍya, Kerala etc and not with the Pulindas. (Kis. Kāṇḍa 41. 11-12). The Kiskindhyā Kāṇḍa[163] of the Rāmāyaṇa locates the country of the Yavanas and the city of the Śakas between the janapadas of the Kurus, the Madras and the Himalayas. Hence this portion of the epic can not be older than the 2nd cent. A. D.. So by this time the Andhras lost their northern portion and took to the Southern one.

The Aśvamedhika parva of the Mahābharata[164] seems to show that the Andhra country reached as far as the Bay of Bengal.

160 Ep. Ind. Vol. XIV. p. 90.
161 J. Dept. of Letters, Vol. XXVI. p. 1 ff.
162 Megasthenes and Arrian, ed. McCrindle. p. 140 fn.
163 IV. 43. 11-12.
164 Ch. 83. 11.

Neither the Periplus nor Ptolemy does mention the Andhra country. The Periplus [165] speaks of Masalia, the Moṣala of the sanskrit works, which is the district of the Maisoloi according to Ptolemy. (VII. 1. 93).

The extension of the Andhras to the east of the Tungabhadrā is proved by the Mayidavolu Plates of Śivaskandavarman, the early Pallava king. It records an order of the prince of the Pallavas from Kāñchī about the gift of a village named Viripāra in Andhrapatha. Dhannakaḍa, generally equated with Amarāvatī was definitely the head-quarter of the Andhra province of the Pallava ruler.

The view of Jayaswal that Khāravela ploughed the city of "Pithuda," ruled by an Avarāja, who according to that scholar was an Andhra king, with a plough of asses, has been controverted by Dr. Barua, who instead of reading "Avarājanivesitaṃ Pithuṃdaṃ gadhabha-nagalena Kāsayati" in the Hāthigumpha text, reads" Puvarāja-nivesitaṃ Pithudagadabham Nakale nekāsayati." If this reading is acepted, it shows that this Pithudaga was not very far from the Lāngulia river and can not be identified with the Pitundra metropolis of Ptolemy in Maisoloi. It is difficult to say which of the readings is correct. If Jayaswal is right, the Andhra kings ruled over the Masulipatam area in the pre-Christian days.

In Bharata's Nātyaśāstra [166] we have references to Moṣala as an important place in S. India. In some of the manuscripts we have the reading "Kośalā Tośalāschaiva Kaliṅga yā cha Moṣalā" while in others we find the alternative reading "Kaliṅga Yavanoṣalā." From this it has been inferred by some scholars that Moṣala was a centre of Yavana-trade. As pointed out by Dr. Monomohan Ghosh such a theory has got hardly any historical value in view of the uncertainty of the reading. Some scholars equate the name Masulipattam with Machalipattan, which means 'fish-town' but such an equation again is hardly a convincing one. According to Sanskrit Lexi-

165 *Peri*, 47.
166 Ch. XIV.

con Pattana means cappital (pattanaṃ yatra rājadhānī sthitā")" and hence Moṣalapattana, capital of the Mosala janapada seems to have been the ancient name of the present Masulipattam region.

The term 'masalia' of the Periplus (62) and the "Maisoloi" of Ptolemy (VII. 1. 15) may equally mean the region of Masulipatam and some scholar[167] identifies the town of Kuduru, the political centre of the Bṛhatphalāyaṇas in about 300 A. D. with a village in Bandar or Masulipatam Taluka. Hence Masulipatam was evidently the most important centre of business in the first two centuries A. D.. It was connected with roads with Dhānyakaṭaka and Paithana, the capital-towns of the Andhras, which, again, were connected with Barygaza, with Ujjain and with Tamluk by separate roads.[168] The region of Masulipattam was also blessed with few marts, like Kontakasella and Allosygne,[169] and "with the point of departure for ships bound for Chryse."

Now we shall discuss other ports and marts of the same region, Masalia. A stūpa pillar fragment with an inscription of the period of Siri Yajña Sāta-Karṇi was found at Chinna Ganjam. Another such fragment was also found at Kollitippa, a lilttle north of Chinna Ganjam. Motupalle is mentioned as a port in an inscription dated Śaka 1166, as pointed out by J. Dubreuil (600 of A.E.R. 1909), and this stands only 3 miles to the N. E. of Chinna Ganjam. The inscriptions No. 600-602 (A.E.R. 1909) speak of the remission of taxes on articles of trade at Matupalle, as a concession to merchants. Thus we see that the Maisoloi region, located between two navigable rivers was very important from the com-

167 Anc. Hist. Dec., p. 85.

168 In connection with the identication of Tagara with Ter Dr. Fleet speaks of an early trade-route from the east coast through Golconda or Haiderabad, Ter and Paithan, to Broach; of which "there were 2 starting points and one was Masulipatam ... and the road from this place took not only the local traffic from the coast districts on the north of the Krishnā but also the sea-borne traffic from the Far Easf." J.R.A.S. 1901. p. 537 ff.

169 Ptol., VII. 1. 15.

mercial standpoint since the first two centuries of the Christian era.

Regarding the Hindu colonisation in the Far East in the 1st cent. A. D. and later, Prof. N. K. Śāstrī[170] says, "It seems .. . probable that movement towards the east was the work of the entire coastal tract on the eastern coast of the modern Presidency of Madras, and that the Andhra country in general and the kingdom of Veṅgi with it, had a good share in this movement."

KANTAKASELA:—This port is mentioned in the Amaravati inscription[171] to be the residence of one of the donors named Utara. Burgess and Lüders have read it as Kaṭakasola. An inscription from Peddavegi[172] also mentions it. This is definitely the port Kontakassyla of Ptolemy (VII. 1. 15) who early states it as a "mart" and places it just north of "the mouth of the river Maisolos." The name is still borne by the modern Ghaṇṭasāla, a village 13 miles to the west of Masulipatam and the sea and lying between the village of Guduru and the mouth of the Krishnā.

Now the position of Kantakassyla at the mouth of the river Maisolos, as stated by Ptolemy was very convenient for trade purposes, because the river was navigable enough to carry traffic from or to a great distance inland and because it could utilise the wide ocean for colonial and commercial expansion. Mr. K. Gopalachari[173] agrees with Yule to say that "Maisolos is the Kṛṣnā and not the Godāvarī as Lassen and S. Lévi would have it." Ptolemy places a Kantakossyla near and a Koddura not far away from the mouth of the Maisolos. Koddura[174] has been equated with the modern Gudur in the Bandar taluq of the Kṛṣṇā district. They were, therefore, nearer to the Kṛṣṇā.

170 Telegu Academy Silver Jubilee, Vol. Eng., Sec. p. 11.
171 Lud., 1303; A.S.S.I., Vol. I. Pl. LXI., No. 54.
172 *M.E.R.*, 1926-27. No. 219.
173 *E.H.A.C.*, p. 8.
174 Anc. Hist. Decan., p. 85.

Dr. Vogel refers to the vast sea-borne trade between the Kṛṣṇā-Godāvarī region and the west through the emporiums of Kantakassyla, Paloura and Koddura etc. The find of Roman coins [175] of the period 68-217 A. D. at Vinukonda in the Guntur district and in the Nellore and Guddapah districts, the mention of a "Vadālābhikaro (ra) yonaka divikayo" in the Alluru inscription and the Graeco-Roman influences in the Amarāvatī sculptures of the 2nd cent. A. D. confirm the theory of Dr. Vogel mentioned above. Repson points out that "the coins bearing the device of ship with masts and the legends 'Sāmi Pu(ḷumā) visa' have been picked out on the Conomandel coast between Madras and Cuddalore." [176] Thus under the Andhra rule, specially under Pulumavi II Kantakasela was a very important commercial town. Kantakasela seems to have played a large part in the international trade, specially under the Iksākus when the Kṛṣṇā-Guntur region flourished as an important centre of proto-Mahāyāna. The Great stūpas of Jaggayyapatta and Nagarjunikonda were built in or before the 3rd or 4th cent. A. D.[177] and the Buddhist Therīs met there from all the Buddhist countries of the world. The mention of Sīhala-vihāra and of the dedication of a Cetiyaghara, specially to the Therīs of Ceylon hints at the friendly relation between the Buddhists of the Ikshāku country and those of Ceylon. The maintenance of such friendly relations among the Buddhists of different countries is most probably due to the relation of sea-trade of this region with Ceylon and others. Recent discoveries of inscriptions at Ghantasāla refer not only to the ancient name of Kantakasela but also to a great sea-captain.[178]

Next to Kantakasela, Ptolemy mentions Koddoura, not of course, as a mart but as an ordinary place. However, its sit-

175 J.R.A.S., 1904. pp. 599 ff.
176 Andhras and Western Kshatrapas. p. 24.
177 Ep. Ind., XX. p. 2.; Ind. Hist. Quly, VII. p. 634.
178 Cf. Ancient India, No. 5. p. 53.

uation as mentioned by Ptolemy in between 2 marts of the same region leads us to surmise that it might have helped the commercial transaction of the other two in the 2nd cent. A.D.. In the next century its importance was enhanced when it was raised to the status of a metropolis of the Bṛhatphalāyanas.[179] Kudura is also mentioned in the Amarāvatī inscription.[180]

This region was also blessed with 'Allosygne, a mart'[181] and the apheterion, i.e., the point of departure for ships bound for Chryse." Hence in the 2nd cent. A. D. this area was really very flourishing, in as much as these emporiums and specially the apheterion testify to the brisk sea-borne trade with Ceylon and with both the East and West. The remains of an ancient quay discovered by Longhurst on the Kṛṣṇā near the Nagar-junikonda plateau may also be referred to to prove the commercial importance of the locality.[182] The gift of crores of 'hiraṇa' (gold) with which Siri Cāṁtamūla is credited, suggests indirectly the volume of trade, both local and foreign, of this zone in the 3rd cent. A. D.

(vii)

Oriya Speaking Area

Oriyā is the language of Orissa and of the adjoining parts of Madras and central provinces. It is spoken in an isolated part of India, being little influenced by other languages. According to Grierson,[183] it is "one of the four speeches which together make up the Eastern Group of the Indo-Aryan languages." It remains almost the same as found in the inscriptions of the 14th cent. A. D..[184] The ancient janapada of Kaliṅga may be identified with the present Oriya speaking

179 Cf. Ep. Ind, VI. p. 315.; *Anc. Hist Decc, pp.* 84-5.
180 Lüd, No. 1295.
181 Ptol, VII. 1. 15.
182 *Ind. Anti.*, 1952. p. 188.
183 Ling. Surv. Ind., Vol. II. pp. 367-8.
184 Imp. Gaz., I. p. 376.

area. Oriya language may be traced back to the time of Bharata (C. 1st cent. A. D.) who speaks of the "Oḍra-māgadhi pravṛtti" in his Nāṭyaśāstra, ch. 14. It is much influenced by sanskrit. Bodhāyana in his Dharmasūtra (1. 1. 2. 16) speaks of Kaliṅga as a very impure country: "Padbhyāṃ sa kurute pāpaṃ yah Kaliṅgāṇ prapadyate." This shows that Kaliṅga was outside the Brahmanical zone during Bodhāyana. But the Rock Edict (XIII) of Aśoka records the dwellings of Brahmanic, Śramanic and other sects and householders and thus proves the penetration of Brahmanical culture in Kaliṅga in between the periods of Bodhāyana and Aśoka.

The separate Kaliṅga Edicts show that Aśoka had conquered this country and divided it into two parts for the sake of administration; Tosali, the headquarter of the northern part and Samapā, that of the southern part of Kaliṅga. Now about Tosali. It is generally identified with the Dhauli area near Bhubaneswar. It is mentioned in the Aśoka's R. E. as a city, and in the Nagarjunikonda inscription. Bharata in his Nāṭyaśāstra ch. XIV mentions it distinguished from Kaliṅga. Ptolemy mentions it as a metropolis.[185] Some inscriptions refer to Dakṣiṇa-Tosala and Uttara-Tosala.[186] Levi[187] says that the Gaṇḍavyūha refers to "Amita-Tosala" in the Dakṣiṇāpatha and its city named Toṣala. Thus we see that Toṣala was originally a city but grew up later on into a country. As regards his second headquarter nothing conclusive has yet been found to determine its position but we may infer that Aśoka built his Jaugaḍa Edict here and so Samapā might have been some where about Jaugaḍ.

The Maṇimekalai[188] and the Śilappadikāram[189] also show the partition of Kaliṅga into two parts, ruled by two cousin brothers waging terrible war against each other.

185 Ptol, VII. 2. 22.
186 Ep. Ind, Vol. IX p. 286; Vol. XXV. p. 3.
187 Cf. Pre-Aryan and Pre-Dravidian in India., trans. by Dr. P. C. Bagchi. p. 176.
188 ed. Aiyangar, p. 187.
189 Op. cit, p. 268.

Pliny speaks of a large island in the Ganges inhabited by a tribe called Modo-Calingae, and Caldwell[190] means by it the whole coast from the Ganges to the Godāvarī. Sir Walter Elliot interpretes the term 'Modo-Calingae' in the sense of Tri-Kalinga which occurs frequently in early inscriptions. But this view can hardly be accepted because Pliny himself speaks of three Kaliṅgas as Gangaridae Kaliṅgae, Modo-Kalingae and Macco-Kaliṅgae, which, according to Dr. Aiyangar[191] corresponds respectively to the region of Kaliṅga bordering on the Ganges, to the central Kaliṅga and to Kaliṅga proper (mukhya). Pliny says elsewhere that the country of Kalinga extends from the Ganges to cape Calington, the northern point of the Godāvarī delta. This vast area may be divided into three separate regions, if we consider its physical features:—i) from the Ganges to the Mahānadī, ii) from the Mahānadī to the Rishikulyā and iii) from the Rishikulyā to the Godāvari. The Mahābhārata[192] also hints at the first region of Kaliṅga when it states that the Vaitaranī flows through Kaliṅga. We know from the Mahābharata[193] that Bhīma conquered the lord of Kaliṅga (2. 27. 22) and Sahadeva also subjugated the people of Kaliṅga (2. 28. 49). The chief towns of Kaliṅga were Manipura, Rājapura and Rājamahendri (Mbh. I. ch. 215—7824; Śānti. ch. 4). The area of Kaliṅga must have gradually been expanded to include all the three regions, mentioned above, but the first two regions were merged in other countries when Kaliṅga lost its political importance and only the third part continued its existence as Kaliṅga proper.

Yuan-chwang witnessed some tens of towns in the Kaliṅga country. He records, "this country bordering on sea, abounds in many rare and valuable articles. They used Cowrie shells and pearls in commercial transactions. They harness elephants to their conveyances for long journeys, (Beal II p. 207).

190 *Comp. Gram. Drav. Lang.*, p. 32.
191 *J. Andh. Hist. Res. Soe.*, Vol. II. p. 9 ff.
192 Mbh, III. 114. 4. (ed. Bhandarkar).
193 Mbh. e., Bhandarkar Ori. Res. Ses., p. 142.

PALOURA-DANTAPURA:—Ptolemy[194] speaks of the Gangetic gulf (VII. 1. 16) and at its beginning fixes the position of "Paloura or Pakoura, a town," which has been taken to be a Dravidian form of the name of the famous city Dantapura, the ancient capital of Kaliṅga. Pal (tooth)+ur(city) = Danta (tooth) + pura (city)[195]. According to J. Przyluski,[196] the element Pal in Paloura is either a Dravidian word meaning tooth or an Austro-Asiatic word meaning 'elephant's tusk.' Caldwell,[197] however, explains the term Paloura by Tamil Pal+ur as" the city of milk." Dr. B. C. Sen[198] also suggests that "the meaning of Dantapura and Paloura is the same" and he thinks of the possibility of the existence of a "considerable tract of country including portions of the Midnapur district and Kaliṅga, once known by some name having Danta as one of its constituent elements." Dantapura has become famous in the Buddhist tradition for its relic, the tooth of Buddha; and it appears to have topped in importance the list of six cities built by Mahā -Govinda.[199]. Thus the very name of the town suggests its important product, tooth or tusk of elephants or milk which might have been used in trade. The account of the Uttarādhyāyana sutra[200] also speaks of its ivory and of a merchant Dhanamitra.

The Mahābhārata [201] speaks of a town called Dantakura. Pliny[202] speaks of the distance" from the mouth of the Ganges

194 Ptol., VII. 1. 16.

195 i) Cf. Pre-Aryan and Pre-Dravidian in India, trans, by Dr. Bagchi. pp. 139-140.

ii) Some Hist. Asp. of the Ins. of Bengal, - Dr. B. C. Sen.(p. 29.

196 Cf. Ling. Surv. Ind., Vol. IV. p. 650.

197 Com. Gr. Dr. Lang., Intro., p. 104.

198 S.H.A.I.B. -, Dr. B. C. Sen, p. 44.

199 Dīgha Nikāya, XIX. 36.

200 Utt. Sūtra, XVIII, 45-46.

201 Mbh. V. 23. 708.; V. 48. 1883 and in the Southern ed. VII. 70. 7.

202 Pliny, VI. XX.

to the promontory of Calinga and the fortified place of Dandagula as 625,000 steps." S. Lévi[203] notes that "the promontory of Calinga ... is evidently the point where Ptolemy locates the aphterion of navigation towards the Peninsula of gold and which marks according to him a sudden change in the direction of the littoral." Hence the nearest fort ('ophidum') can not be anything except Paloura of Ptolemy, otherwise called Dantapura and as Pliny calls it, Dandagula. The elephant 'Kura' in the sense of sanskrit 'pura' is also traceable in Ptolemy's 'Hippokoura' (Pg. 83). As regards the alternance of Paloura-Dantapura, S. Lévi[204] remarks that "in the time of Ptolemy the Dravidian language was disputing the territory of Kaliṅga with the Aryan dialect. Even to our day, Chicacole and Kalingapatam and the Taluk of Palkonda are in the Telegu country; the limit between the Aryan and the Dravidian is more to the north, almost midway between Chicacole and Ganjam."

Ptolemy[205] points out the position of Paloura as referred to by Marinos of Tyre and corrects in his own way the distance between Paloura and Sada. MrCrindle [206] notes that "the passage across the Gangetic gulf from Paloura to Sada in a direct line from west to east is 1300 stadia." Marinos speaks of the journey from Paloura to the Golden Khersonese via Sada and the city of Tamala.

Hence the importance of Paloura for its enviable situation on the route of commerce between India and the Far East. It is really surprising that such a place is not mentioned elsewhere. The Periplus speaks of the direct voyage from the harbours like Sopatma to either the Ganges or Chryse. Hence no station on the coastal voyage in between them is found recorded, except the "region of Dosarene yielding ivory" (62). Paloura must have been at the region of Dosarene.

203 *Pre-Ary. and Pre-Drav*, tr. by. Dr. Bagchi. p. 170.
204 Ling. Surv. Ind. Vol. IV. p. 577.
205 *Ling. Surv. Ind.* Vol. IV. p. 577.
206 McCrindle - Ptol, p. 24.

Old traditions centring round the first lay disciples of Śākyamuni, Trapuṣa and Bhallika speak of merchants coming from the coast of Burma and landing at the coast of Paloura.

Kauṭilya mentions "elephants of the country of Daśārṇa" as "of middle quality." Hence we may expect ivory of this region being exported through the port of Paloṛa in about the 3rd. cent. A. D. (Cf. Kau. II. 11. 50).

CARITRAPURA:— It was also one of the trading stations of Orissa, described in detail by Yuan Chwang as standing "near the shore of the ocean in the South-east of Wu-tu," as "a thoroughfare and resting place for sea-going traders and strangers from distant lands," and as "a city naturally strong, containing many rare commodities."[207].

S. Lévi has shown that the apheterion of Ptolemy is equated with Caritrapura of the Chinese pilgrim and some sanskrit texts. (Cf. Etudes Asiatiques). Ptolemy locates the point of departure at a promontory where the coast turns suddenly from the direction of W. N. W. - E. S. E, to that of S. N. and likewise the Chinese pilgrim fixes the port on the south-east border of Orissa, and to the north-east of the kingdom of Malakuṭa.

The term 'Charita' is mentioned as one of 24 (pīṭhas) sacred places presided over by "Skeleton divinities" in a Tāntric work, Dākārṇava, along with Sopāra, a port on the west coast which was also once the starting point of ships for the Far East. ("Jayantyam pṛṣthapure tu Sopāre Charite tathā"). [208] That is why Lévi asserts that Charitra was a 'Samudraprasthāna,' i.e., 'departure for the occean.'

207 Cf. Watters, p. 194.; Beal, II. p. 205.

208 Cf. Descriptive catalogue of Sk Mss. in Govt. coll. I. Buddhist Mss. Cal. 1917. H. P. Śāstri.

(viii)

Bengali Speaking Area.

BENGALI:—"The area in which Bengali is spoken may be roughly stated to coincide with the province of Lower Bengal, as distinct from Chota Nagpur, Behar and Orissa. The language also extends on the west into Chota Nagpur, being spoken in the eastern portions of that division. On the east it extends into the Assam valley where it gradually merges into the cognate Assamese language. It also occupies the Assam districts of Sylhet and Cachar, which formerly were counted as a portion of Lower Bengal and which in ancient times formed part of the original kingdom of Vaṅga .... It stretches down the east littoral of the Bay of Bengal into Northern Burma. .... From the river Hugly its southern boundary extends in a north- westerly direction across the centre of the district of Midnapur and then curves south again so as to include the Dhalbhum portion of the district of Singhbhum running along the northern frontier of the state of Mayurbhanja, till it meets its own western boundary. South of Singbhum there are large numbers of speakers of Bengali. ....Its extreme south-western boundary can not be defined exactly, as here it shades off gradually into the cognate language of Orissa. Its western boundary runs through the district of Singbhum and includes the whole of Manbhum. It then meets the Santal Parganas .... and runs nearly due north, following closely the course of the Mahānandā river, through the districts of Malda and Purnea, upto the Nepal border."[209]

TAMLUK:—The country of the Suhmas - the hinterland of Tamluk.

The Suhmas are mentioned in the Purāṇas (Mk. P. ch. 58, p. 325 n.) and the Great epic as the people allied to the Aṅgas, Vaṇgas, Kaliṅgas and Puṇḍras. Pāṇḍu is said to have subdued

209 Ling. Surv. Ind, Vol. V, pp. 1 & 12.

the king of Sumhas.[210] Mahāvīra is also noted to have visited their country (Subbabhumi.).[211] Patañjali mentions them as well. The Mahābhārata[212] mentions that Bhīma conquered them and it helps us to locate their region on the east of Magadha, on the south of Nepal, on the west of the Lohitya (Brahmaputra) river and on the north of the Bay of Bengal. Bhīma started from Videha (Dārbhāngā) and came to the Suhmas. He killed the king of Modāgiri (Monghyr - V. 1095) on the way and then faced the king of Puṇḍra (1096) and the king living on the bank of the Kauśikī: "Tataḥ Pauṇḍrādhipaṃ vīraṃ Vāsudevaṃ mahāvalaṃ/Kauśikīkacchanilayaṃ rājānam cha mahaujasaṃ." (II. v. 1096) Cal. ed.

Next he conquered Vaṅga (Vaṅgarājamupādravaṭ- 1097), Tāmralipta, and Karbata (1098). Afterwards he conquered the King of the Suhmas along with those living on the sea-shore (v. 1099).

Thus we see that the country of the Suhmas was adjacent to the sea-shore and very close to Tāmralipta. Kālidāsa[213] also men- (upakaṇṭhaṃ mahodadheḥ). The Bengalees are reported to be maritime people ("Vaṅgān. ..... nausādhanodyatān"-Raghu IV. 36). The Mārkaṇḍeya Purāṇa[214] also speaks of the Suhmas in the eastern division of India represented in the shape of a tortoise with its face turned eastwards. Suhma[215] has been described as an eastern country in the Bṛhatsaṃhitā of Varāhamihir.[216] Rājaśekhara also places it in the eastern section of Āryāvarta in his Kāvyamīmānsā.[217]

Tāmralipta was the most important sea-port of this region.

210 Mbh, I. CIV. 4217-21. and I. 113. 4453 ed. Calcutta.
211 S.B.E, 1. 8. 3.
212 Mbh, II. 27. 22-25. (Ed. Bhandarkar, 1944).
213 Raghu, IV. 32. 34-35.
214 Mark. Pur. canto. LVIII. 12.
215 Nīlakaṇṭha, while commenting on Mbh. II. ch. 29 opines that Suhma and Rāḍha are synonymous.
216 Ch. XIV. 5.
217 pp. XLI. 93; ch. 17.

Of course, it is not referred to anywhere in the Vedic literature. Most probably it rose to prominence in the 6th or 5th cent B. C., when it was linked by roads with Rājagṛha, Śrāvastī, Gayā and Benares.[218] The Mahābhārata[219] mentions Tāmralipta, a people of Tāmralipta bringing tribute to Yudhiṣṭhira. Bhīma[220] is said to have conquered this region. We learn of Mahendra's journey by water from Patna to Tāmalitti and on to Ceylon.[221] The Mahāvaṃsa[222] speaks of the journey from Jambukola in Ceylon to Tāmmalipti as that of 7 days only. Aśoka is stated to have travelled upto Tāmalitti to see off the ship carrying a branch of the Bo'tree to Ceylon and his journey by land over the Vindhyas to the mouth of the Ganges took only 7 days.[223] This shows that Tāmralipta was connected with the cities higher up on the Ganges, both by land and water. Dr. B. C. Sen[224] also has accepted the "identification of Tāmralipta with mod. Tamluk" as a matter "settled beyond any dispute;" and has spoken highly of this place "where trade and commerce were brisk" enough to invite "opportunities to fortune-seekers."

It is surprising to note that Tāmralipta is not mentioned in the Periplus,[225] which speaks of the river Ganges and of a market-town of the same name. Pliny[226] mentions Parthalis as the capital of the Gangaridae (Calingae). Dr. B. C. Sen suggests that Parthalis might have been located even outside Bengal proper, since Pliny connects the region with Kaliṅga. His "Taluctae" may be taken "as the people" of Tāmralipta. Ptolemy mentions Tamalites[227] on "the river (Ganges) itself."

218 Rhys Davids, Buddhist India, p. 103.
219 Mbh, II. 52. 1874. - ed. Bhandarkar.
220 " II. 27. 22.
221 Vin. p., III. 338.
222 Mahāvaṃśa., XI. 20.
223 " XIX. 6.
224 Dr. B. C. Sen - S.H.A.I. Beng. pp. 38-39, 41.
225 Peri, 63.
226 Pliny. N. H, VI. 21. 22.
227 Ptol, VII. 1. 73.

It is interesting to note that it is recorded there as an ordinary town, not as a mart or port.

It is interesting to point out the remark of Sri D. P. Ghosh (Curator, Ashutosh Museum. C. U.) that Tāmralipta was "one of the greatest and oldest sea-ports of South East Asia," where the exploration recently carried out by the Ashutosh Museum of the University of Calcutta led "to the discovery of a large variety of terra-cotta plaques of intriguing character of the Maurya, Suṅga and Kushāna period; and a peculiar gold coin almost baffling identification."[228] The Periplus [229] refers to a "gold coin, called Caltis and gold-mines" near about Gange. It may not be unlikely that "the peculiar gold coin" uncarthed, as mentioned above, represents the type of the Caltis, hitherto unknown. Besides the archaeological excavations in 1955 at Tilda (Midnapur dist.), very close to Tamluk "yielded from the surface a unique object in the shape of a terracotta tablet inscribed in Greek of about the beginning of the Christian era." From- Raghunathbari, a few miles north-west of Tamluk has been unearthed a series of terracotta heads. Terracotta objects and figurines like toy-elephants, ram-carts and potteries have also been explored from Bahiri further down the coast within a considerable distance from Tamluk. All these and a collection of some 350 coins, all dating from the Śuṅga period or a century or two before the Christian era"[230] show that Tamluk and other important sites around it might have been trade-centres in the Maurya, Śuṅga and Kushāṇa periods. "Fahien remained here for two years and ... shipped himself on board a great merchant-vessel", bound for Ceylon. (Beal I,lxx ii.) The distance between Tāmralipti and Ceylon is reported to be 700 Yojanas. "The great merchant-vessels show the volume of trade between the two during Fahien's days.

Yuanchwang also records that "wonderful articles of value and gems are collected here in abundance and the people are

228 Cf. Arch. Disco. in Lower Ganges Valley, p. 1.
229 Peri, 63.
230 A.S I, 1921-22, pp. 74-75.

very rich" (Beal II. p 201) and thus indicates the volume of trade even in his time.

GANGE:— The importance of Gange or Ganges as a mart or a port is proved by its reference in both the Periplus (63) and in Ptolemy (Fg. 81). Its identification with Tamluk admits of no reason because both of them are mentioned in Ptolemy, as being located in two different political divisions. Tamalities has been put in the Mandalai with Palimbothra as the Royal residence; whereas Gange itself is mentioned as "the Royal residence" of all the country about the mouths of the Ganges occupied by the Gangaridae. Dr. R. C. Majumdar[231] says that "the accounts of the Periplus and Ptolemy seem to indicate that in the first two centuries A. D. the whole of deltaic Bengal was organised into a powerful kingdom with its capital at Gange, a great market-town on the bank of the Ganges." Taylor's identification of Gange with Suvarṇagrāma (mod. Sonargaon near Dacca) is also untenable for Ptolemy has separately mentioned Sounagoura as a town of his 'Trans-Gangetic India' elsewhere.[232] Dr. B. C. Sen[233] remarks that "Hugly may be better chosen as the most suitable centre of trade in ancient Bengal to carry on business with the Tamils and with Suvarṇabhūmi. Dr. D. C. Sircar, however says that "the modern representative of this ancient city seems to be the holy place at the junction of the Gaṅgā and the Sāgara or Gaṅgā-Sāgara. The name Gaṅgā, suggested by the early Greco-Roman writers, may be regarded as an eka-deśa of the name Gaṅgā-Sāgara." (G.A.M.I.,—p. 140).

The explorations near Berachampa (in 24 Parganas), conducted on behalf of the University of Calcutta in 1948 and 1950 yielded a number of relics of the period between the Maurya and the Gupta ages, and brought to light an ancient fort (gaṛh) surrounded by rampart walls. The most interesting

231 Hist. of Bengal, Vol. I. Ch. III, p. 44.
232 Ptol. VII. II. 22.
233 Cf. Dr. B. C. Sen, S.H.A.I. Beng, p. 28.

of the relics, found out were 100 silver punch-marked coins, the earliest coins circulated in India and some terracotta seals, inscribed in Brāhmī characters of the period between the 2nd cent. B. C. and 1st cent. A. D. Besides these, some portions of rouletted wares and wine vases of perhaps Roman origin, "terra-cotta figures betraying Hellenistic influence in the folded tunic and sandals, and stamped and inscribed sherds of the Kushāna period" - were also found out. Mention may also be made of" the numerous inscribed seals[234] bearing early characters," assigned to the first three centuries A. D., which when fully deciphered may throw a flood of light on the culture of Lower Bengal in the close vicinity of Gange just before and after the Christian era.

Moreover, a few copper cast coins, beads of various stones, dishes of pottery and by far the most interesting objects in the shape of a number of fragmentary black pottery cups of perhaps foreign origin[235] deserve mention. Hence the importance of Chandraketugaṛh near Berachampa as a seat of ancient commerce on the Bidyādharī, once a branch of the Ganges.

The authorities of the Asutosh Museum have also brought to light the existence of another important port of Bengal at Harinārāyanpur, 4 miles south of Diamond--Harbour on the dried-up forgotten Saraswatī river. Here also fragments of potteries and terra-cotta antiquities belonging to the Śuṅga and and Kushāṇa periods, specially the "rouletted potsherds of Roman or Romanised origin"[236] and "a hoard of the uninscribed copper-cast coins of the early period including two with rare designs of a camel and a ship" have been found out to prove the commercial importance of the ancient site.

Some of the antiquities prove undoubtedly the commercial intercourse of Lower Bengal with the Greek and Roman

234 Arch. Dis. L. C. Valley, p. 6, Fg. 5(a) and (b).
235 " " „ pp. 9-10. Fg. 7.
236 Arch. Dis. L. G. Valley, pp. 11-13.

world in the first two centuries before and after the Christian era. It may not be unlikely that even the Roman colonies were planted in these areas, as in Arikamedu for trade purposes. The Periplus records that "through this place (Ganges) are brought malabathrum and Gangetic spikenard and pearls and muslins of the finest sorts" and shows thereby the export of this hinterland through the port "Ganges" to the western world in its time. "Gold mines" and "gold coins" of these areas might have added to the interest of the foreigners.

CHAPTER IV

Inland Towns of India

POCLAIS:—Let us begin our enquiry with Poclais, the first of the towns on the Royal road at its western corner. It was the old capital of the janapada of Gandhāra and was situated to the west of the Indus. The Rāmāyaṇa[1] states that the kingdom of Gandhāra lay on both sides of the Indus. The Mahābhārata also speaks of two royal cities of Takṣaśilā and Pushkalāvatī, i.e., Peukelaotis in Greek, the former situated to the east and the latter to the west of the Indus. The Great epic records among gifts to Yudhiṣthira at the Rājasūya horses of the best quality of Gandhāra, like those of Kāmboja and Bālaika. (II. 51. 1830 ed. Bhaṇdarkar).

This city, like Taxila, stands at the very gate to India from the west and the north. Arrian[2] tells us that the river Kabul falls into the Indus in the land called Peukelaotis taking with itself the Malantus, Soastus and Guraeus. The city lay on the road from the Kabul to the Indus. Hence it was at the junction of important land-routes, easily approachable by the river-routes as well. That is why Pushkalāvatī rose as a mart as well as a metropolis and Arrian describes it as a very large and populous city lying near the Indus and the capital of a prince called Astes.

This valley of Poclais (Prang and Charsada) is really very important for its fertility of soil. It is watered by many broken and meandering channels of the Swāt and Kabul rivers and to the north and east, this natural irrigation is supplemented, as was also in ancient times, by a network of artificial canals.[3] Charsada stood on the east side of the Swāt, some four miles

1 Rāmā, VII. 113. 11; 114. 11.
2 Chinnock's Arrian's Anabasis of Alexander and Indica, p. 403.
3 A.S.I.R., 1902-3, p. 144.

to north-west of its confluence with the Kabul and roughly at the heart of the valley. Canal works may be still traced in Tangai above the line of the present Swat canal.[4] Thus the natural productivity of the soil, the most convenient position of this city at the confluence of the great trade-routes and the iron-handed administration of different rulers in this portion of the land brought about its economic rise and development.

Demetrius, before crossing the Indus and occupying Taxila, took possession of Gandhāra, the country between the Kunar river and the Indus, which became gradually one of the strong-holds of the Greek power. "Pushkalāvatī became a Greek 'polis;' as is shown by the Fortune of the city on King's coins. The solitary coin of the city[5] shows besides Śiva's bull, the Fortune of 'the city of lotuses' with her mural crown, holding in her hand the lotus of Lakshmī.[6] While Pushkalāvatī was the capital of the Greeks, the regular Greek line of Communication westward ran not through the Khyber pass but by the route more to the northward once used by Alexander. Pushkalāvatī was placed under the rule of Demetrius II who was left to rule all the country between the Hindukush and the Indus from the new headquarter at Alexandria-Kapisa and who had to improve the communication between Gandhāra and Bactra. Besides, the Panjshir valley was rich in silver-mines and this made Kapisa easier enough to be the principal mint of the province. Roads were much improved and made more secure and hence a brisk trade was carried on between Pushkalāvatī and Bactra via Kapisa and silver could be easily imported from the mines into India. Cunningham[7] speaks of three routes across the Hindukush into Bactria, all of them commanded by Alexandria-Kapisa. The central route was too high to be ordinarily used; the N. E. route, used by the Greeks was a bit longer; while the S. W. route used even today was

4 Peshawar Dist. Gaz, ed. 1897-8, p. 15.
5 C.H.I., p. 587 and Pl. VI. 10.
6 Tarn, G.B.I, p. 136.
7 A.G.I, p. 28.

the most direct route and frequently used. The Greek kings did all they could—road-improvement, shelters and depots of provisions.

Towards the beginning of the 1st cent. B. C. (C. 80 B. C.) the Śakas had already occupied Sind and Greek sea-provinces. They came up the Indus and conquered Taxila and Gandhāra. Antalkidas was one of the important Greek rulers to have his sway over all the regions west of the Jhelum and the last two Greek kings, Peucolaos and Artemidorus who reigned and coined at Pushkalāvatī, were succeeded by Maues.[8] The loss of Patalene and Surastrene meant to the Greek kings the loss of their hold on the sea-ports but when the Śakas advanced upto Gandhāra, trade-routes from the mouths of the Indus via Pushkalāvatī to the west and the north were used without any interruption. Tarn[9] points out that one result of Śaka conquest is reflected on their coinage. Maues celebrated his decisive victory over a Greek fleet on the Indus on his coins[10] and his conquests of Taxila and Gandhāra cut off for the time being the Greeks of the eastern Punjab from those of the Paropamisadae. But with his death all hostilities ceased and Greek rule revived. Hermaeus, who is supposed to have ruled over all the Paropanisadae, was certainly in touch with the kingdom of Hippostratus on the Jhelum.[11] Both these kings might have used silver from the Panjshir mines for their coinage. Their tetradrachms in plenty testifies to the increased trade with the west. A coin of Hermaeus has been found out even in Chinese Turkestan and in Khotan. This shows that his traders must have run far and China was brought into commercial contact with Pushkalāvatī and other parts west of the Indus. It is interesting to note that Pushkalāvatī, as a Greek 'Polis' enjoyed autonomy even under Śaka

8 Cf. Tarn, G.B.I, p. 316.
9 Tarn, G.B.I, p. 322.
10 Cf. B.M.C, p. 71. No. 17. Pl. XVII. 2.
11 Cf. Tarn, p. 337.

and Parthian rule, as evidenced by the unique coin[12] and also by a coin of Zeionises.[13]

A Kabul museum stone inscription of the year 83 (Acta Orintalia xvi) discloses the name of a satrap of Pushpapura named Tiravharna. Thus we see that Pushkalāvatī was under the control of the North Indian Kshatrapas. A few coins with the inscription "Manigulasa catrapasa Jihoṇissa" were discovered and Rapson[14] thought that Manigula and Jihoṇika were satraps of Pushkalāvatī under Azes II. But in view of the inscription of a Jihoṇika of the year 191 found in Taxila by Marshall, Jihoṇika may be accepted as a satrap under the Kushāṇas. However, Pushkalāvatī, like Taxila was under the control of the Śakas, the Parthians and of the Kushāṇas. Gondopharnes annexed the Peshawar district before the 26th year of his reign and the Periplus bears testimony to the ousting of Śaka rule by the Parthians in the Lower Indus valley. Thus we see that Gondopharnes controlled the two main routes of trade of North-western India and of the Lower Indus valley. Both these regions were fertile and productive and so blessed with economic importance. Pushkalāvatī may be naturally expected to have had flourishing trade during this period.

Next under the Kushāṇas trade between China, India and the Roman empire got further stimulation. Strabo, Pliny and the Periplus refer to a brisk trade between India and the Roman empire in the 1st cent. A. D.. Pushkalāvatī had a lion's share in commercial transaction of this period. Besides the discovery of the sea-routes by Hippalus[15] to the western world from India, new trade-routes were opened from India via Pushkalāvatī to central Asia and China in the 1st cent. A. D. under the Kushāṇa kings. This was the epoch when

12 C.H.I, Pl. 10.

13 B.M.C. p. 110. Nos. 1.2. Pl. XXIII. 4.

14 Rapson, Indian coins, 9.

15 Pliny notes that Hippalus is monsoon personified and thus some scholars reject the theory of the existence of a sailor of that name.

under the Kushāṇas, Indians began to plant her colonies in the Khotan region and also in Kāshgar. These colonies evidently formed the link in the trade-relationship between India and China. Indian trade with C. Asia and China in the age of the Śakas and the Kushāṇas was carried by the N. W. route through Pushkalāvatī.

The Periplus[16] records that through Poclais goods were sent to be exported outside to Barygaza by the Taxila-Ozene-Barygaza route. Its author says, "from the upper country is brought the spikenard that comes through Poclais i.e., the Caspapyrene (of Kashmir) and Parospanisene (of Sub-Hindukush) and Cobolitic (of the Kabul valley) and that brought through the country of Scythia, also costus and bdellium." Proklais is also mentioned by Ptolemy[17] as one of the cities between the Souastos and India."

In early Pali literature[18] and in the Arthaśastra[19] we have references to horses of Kāmboja. Though we have no direct evidence yet it would not be possibly wrong to surmise that in this horse-trade Pushkalāvatī might have played an important part, as it was an important mart of the region lying to the west of the Indus.

Yuan Chwang[20] described the country of Gandhāra as "rich in cereals, flowers and fruits and in sugar-canes" from which the people prepared "solid sugar." This state of affairs may have been as old as the time of the Scytho-Parthians.

Though Yuanchwang mentions Pushkalāvatī as a populous town (Beal I. 109), its importance was much diminished by his time, perhaps because the sea-route was preferred for trade with the western countries; and its activities as a commercial emporium were probably shifted to an adjacent rising town

16 Peri, 48.
17 VII. I. 44.
18 Sumaṇgalavilāsinī, I. p. 124.
19 Kautilva. II. XXX. 133.
20 Beal I, p. 98.

Utokiahancha (Ohind) growing on the Indus, in which, as recorded by the Chinese pilgrims, "the inhabitants are rich and prosperous and here is amassed a supply of valuable merchandise, and mixed goods from all quarters." (I.114). Most probably the river Indus owing to its navigability attracted the mart-life just to its border.

TAXILA:—Cunningham "places the site of Takṣaśilā at the modern Shah-dheri, one mile to the N. E. of Kālakasarai where he found the ruins of a fortified town and was able to trace the remains of no loss than 55 stūpas."[21] Marshall speaks of three separate city-sites in the same valley watered by the Haro river with distinct strata of remains in each. The local tradition says that the Bhiṛ mound was the oldest of all sites of Taxila. Marshall's excavations confirm this tradition and show that this city was thrice destroyed and thrice rebuilt before the Bactrian Greeks shifted to a new site at Sirkap in the beginning of the 2nd cent. B. C. and the third city known now as Sirsukh was built in the 1st cent. A. D., most probably under the Kushāṇas.

It is interesting to note the comment of Mr. J. Allan[22] on the coins found on the old site of Taxila:— "The inscribed coins are of three classes, 1) the Negama series, 2) the Pañcanekame series and 3) the Hirañaṣame series. Of these, class 1 are oblong struck copper pieces with the characteristic Indian incuse on one side. They all bear the inscription negamā (Sk. naigāmah), 'the traders or possibly an adjective (fem.) from nigama,' 'market merchant guild, quarter of a city.' The ward is either the name of the issuers or an adjective from it. In any case it indicates 'mercantile money token issued by traders,'[23] or 'trade token', coin of commerce'.[24] Mr. Allan adds further that these "negama coins, known from only the

21 A.G.I, pp. 104-5.
22 Cata. of Ind. Coins. Anc. Ind, Intro. CXXVI, Fg. 145.
23 Buhler, Indian Studies, iii. 2nd ed Strassburg. 1898. p. 49.
24 Cf. Cunninghum, A.S.R, XIV. p. 20.

Cunningham specimens in the Museum, are exceedingly rare"[25] and he has placed them in the first quarter of the 2nd cent. B. C.. Hence we may assume that these coins of Taxila were used as means of exchange in business transactions in the 2nd cent. B. C. and that the inscriptions of these coins 'negama' indicate the existence of trade-guilds in the city, in the period concerned.

Taksaśilā is as old as the time of Pāṇini[26] who refers to it. It is frequently mentioned in the Jātakas as a famous university town. Taxila was according to the Jātakas,[27] 2000 leagues away from Benares. The Jātakas testify to the trade relations between the Kāshmīra-Gandhāra kingdom and Videha.[28] The Niddesa [29] tells us that in Taxila men used to flock in the wake of trade and commerce to earn money, not only from Benares, but also from Śrāvastī from which the road lay through Soreyya.[30] The natural advantages of its position helped much to the growth and development of this town. It was fortunate to occupy the most enviable position of a junction of three great trade-routes of the ancient world, one from the Ganges-Jamuna valley and Eastern India, the same as the 'Royal highway' of the Mauryas described by Megasthenes running from Pāṭaliputra to the N. W. frontier; the second from Western Asia through Bactra, Kāpisi and Pushkalāvatī and crossing the Indus at Ohind to Taxila and the third from Kashmir and Central Asia by way of the Srinagar valley and Baramla to Mansehra and down the Haripur valley. Thus Taxila stood as the main gate to India connecting herself with central and western Asia from the commercial point of view and these three trade routes carried the bulk of her traffic to and from those parts by land. Taxila

25 Allan, C.I.C.A.I, Fig. 148.
26 Pān. IV. 3. 93.
27 Telapatta Jāt, 96 and Susīma Jāt, 163.
28 Jāt, III pp. 365-369.
29 P.T.S, Vol. I, p. 154.
30 DhA, i. 326.

as a market-town owed its growth and rise mainly to these trade-channels. It is interesting to note that Taxila's prosperity survived so long as these trade routes were freely utilised and it was due to their diversion or decline that Taxila lost its commercial contact with the foreign countries on the north and west and dwindled into insignificance.

Taxila was in the hey-dey condition under the Greeks and even before them. Arrian speaks of it as a great and flourishing city in the time of Alexander the Great - "the greatest of all the cities between the Indus and the Jhelum,"[31] Strabo[32] speaks of this area as thickly populated and extremely fertile. Plutarch[33] also remarks on the richness of its soil. This is corroborated by Yuan Chwang[34] who speaks highly of the fertility of this valley, of its rivers and springs, of its rich crops and of its luxuriant fruits and flowers.

The Achaemenid emperors laid stress upon the making of good roads for the easy administration of their vast empire and these roads, well watched and made safe from all dangers and difficulties were utilised for both the swift transport of troops and of trade-articles.[35] Hence India could easily carry on business with the west through these routes. Silver coins struck after the Persian pattern, pieces being equivanent to double sigloi or staters, half and quarter sigloi, have been unearthed from this area,[36] and this testifies to the close trade-relations between N. W India and Persia under the Achaemenids.

We know of Alexander occupying it and appointing Philip as its Satrap. Next under the Mauryas Taxila was turned into a second capital with Aśoka and Kunala as its governors

31 Anab. Alex, lib. V. 8.
32 Geo, lib. XV. 28.
33 Plut, Alex. Lix.
34 Beal II. p. 137; Watters I. p. 240.
35 Cf. Marshall, Taxila, Vol. I. p. 26.
36 Cf. Allan, B. M. Catal. of Ind. Coins, pp. xv-xvii.

and subsequent rulers. Marshall[37] speaks of the benefits of Maurya rule how "stress was laid on the construction of trade-routes and rendering them safe from bandits. ...weights and measures were standardised and a more or less uniform coinage was issued from the royal mints which must have greatly facilitated trade and commerce between different parts of the empire." It has already been pointed out that Megasthenes saw the royal road from Pāṭuliputra to Taxila extended via Pushkalāvatī to Kāpisi where it was connected with the Seleucid road to Bactra, Hecatompylos and the west. The excavation of Bhir mound has brought to light a particular type of pottery, beads and terracottas etc, which according to Marshall, belonged to the Maurya period.

The sites of Sirkap and Sirsukh, as mentioned above, represent the cities which flourished from the 2nd cent. B. C. to the 2nd cent. A. D. and Taxila is noted as an important town by Patañjali in his Mahābhāṣya[38] In the 1st cent. B. C. the Greeks in India imported silk from China for Chinese jade[39] was found in Taxila. "The rare scallop-shell (no. 1) of striking size and shape, identified by the Zoological survey of India as a Japanese species has been found in its natural uncut state at Taxila."[40] This is the earliest document of the existence of Japan in that hoary past[41] and of a trade connection (presumably through Central Asia) between the north west India and the shores of the Pacific as early as the beginning of the Christian era.

The stratification of Taxila, according to Marshall shows that Maues was the first of the Śaka kings of Taxila. The regular Parthian formulae, used by the members of the family of Vonones, is also found on the coins of Maues and hence

37 Marshall, Taxila, 1. p. 26.
38 Mahābhāṣya, 1. 3. 10. p.268.
39 A.S.I, 1919-20, part 1. p. 19.
40 Marshall, Taxila. II. p. 667-9. Cf. "sk. 26-xx, - 2, 215/a; sq.
110 52 stratum II. Cf. p. 168 (11) Pl. 2029.
41 A.S.I, 1926-27, p. 118 No. 14.

he may be safely regarded as a Śaka coming to India through the Merv-Herat-Seistan route from Eastern Iran. Rapson[42] says that "Takṣaśilā . . . . passed under the sway of the Śakas during the reign of Maues."

The Śakas moved up the Indus valley from Sind to Taxila. They established themselves at the expense of the Greeks and for a time separated the remnants of the two Greek houses, the house of Apollodotus and Menander, i.e., Hippostratus in the eastern Punjab and that of Eukratides, in the Upper Kabul valley. But the Śakas had deep respect for Hellenic culture and adopted the Greek form of coinage and even the Greek legend on the obverse of the same. Maues, seated at Taxila and ruling over Pushkalāvatī (according to Rapson) controlled the main trade-route from N. W. India to Bactra and Seleucia and hence we may presume that trade under the Śakas went on briskly as before and it may not be unlikely that the Śaka rulers copied the Greek coins perhaps because similar coinage would make commercial intercourse with the west far easier. Besides, the Lower Indus valley remaining under the Śaka rule, Taxila could easily utilise the ports at the mouth of the Indus for her overseas trade to the countries in the west. The most notable thing about Hippostratus in the Eastern Punjab is the appearance of his tetradrachms in large quantities. (N.N.M. p. 26). These coins were issued more for the Greeks than for the Indians. Now towards the end of Greek rule in India, when the Greeks were definitely diminished by Śaka war, the phenomenon of issue of tetradrachms in great quantities may be interpreted as an indication of a friendly relation between these Greek kings and Śaka rulers. Tarn[43] points out that "Hermaues and Hippostratos were in touch and though no doubt they could have maintained communications through the hills north of the Śaka kingdom, still the Śakas held the great road and for effective purposes of trade Hippostratus could only reach Hermaues

42 C.H.I, I. p. 505.
43 Tarn, G.B.I, pp. 337-8.

and the west across the Śaka territory, which again shows that there must have been an interval of peace. Hippostratus would not have coined tetradrachms in quantities, had he not been in communication with the west through the Alexander-Kapisa gateways." Thus we are sure of this fact that Taxila played a prominent part in her trade with the west during the Greek and Śaka rule.

The brief history of Parthian rule in Taxila is more interesting from the commercial standpoint. A large number of old finds including gold jewellery and vessels of silver and bronze have yielded themselves to the spade at Taxila. The people must have hid them under earth as treasure hoards most probably fearing the Kushāṇa raids. These precious articles give us a fair idea of the material culture of the Parthians. Gondopharnes occupied Taxila from the Śakas and possessed Greek states in India and Afghanistan. His sympathy for Greek culture brought about the commercial transaction between India and the Graeco-Roman world. Land routes through Parthia were thrown open to India for the influx of articles from the western world. Gondophornes encouraged local artists and craftsmen to imitate Greek models and he did his best to facilitate trade between India and the west. Amber was largely imported from the west and seven beads of amber have been unearthed from the Śaka-Parthian stratum in Sirkap.[44] The Indo-Parthians at Taxila imported copper from the west and also from the mines of Afghanistan and Kashmir[45] presumably by the land routes west of India. Besides, glass-vessels found out at Taxila, which, according to Marshall, are all "of foreign origin" and date "nearly from the first cent. A. D.[46] and which resemble the things "common throughout the Roman empire during the early centuries of the Christian era," show without any shadow of doubt that Taxila imported these things of glassware

44 Cf. Marshall, II. p. 740.
45 Marshall, II. p. 565.
46 " II. p. 685-7.

from the west. This fact is confirmed by recent excavations at Begrām, the ancient Kāpisi in Afghanistan, as a result of which M. Hackin "has unearthed a surprisingly rich collection of glass-ware, almost all of which was imported from Syrian or other factories round the coasts of the Mediterranean."[47] The Periplus (39) also records the same fact that glass-vessels were imported to Barbaricum, whence they would have naturally found their way up the Indus to Taxila. Small flasks of sea-green transculent glass with silver-grey patina are found out in a large stone-jar in a jeweller's shop at Sirkap. Like glassware, some of the Parthian silverware seems to have been imported from the same region.[48] The Parthians were rulers of a large part of Afghanistan and we can safely conclude that they possibly imported silver largely from the local mines of Afghanistan into Taxila. And as regards import of silverware from the west to Taxila, the great land-routes of W. Asia might have been equally used during the Parthian period. Silver-objects[49] show clearly that they were uncommonly Hellenistic in form and they had been highly appreciated in the Parthian markets at the same town[50]

Small vessels of agate were in vogue in Taxila in the 1st cent. A. D. and some fragments of these vases have been found out there and these correspond very closely with Pliny's description of the famous 'vasa myrrhina' which was sold in Roman markets at a very high price. The manufacture of agate vases was an important industry of ancient India, specially in Kathiawar and round about the gulf of Cambay. During the period of the author of the Periplus the principal market for exports of agate-stones to the western world was at Barygaza. It seems probable that some agate stones from these manufacturing centres were carried up the Indus to

47 " II. p. 685-7.

48 The Periplus (39) states that silver and gold plates were imported into Barbaricum and we may presume that these were taken from the mouth of the Indus to Taxila.

49 Marshall, Taxila. II. Pls. 187-189.

50 " " "p. 607.

Taxila, particularly during the Parthian rule.[51] The Parthians were the masters of both the sea-route and the land-route to the west. Hence before the discovery of the Hippalus the Parthian merchants might have exported agate vessels to Rome from India through the land-route of Taxila-Kabul-Herat. That is why Pliny wrongly alleges that agate vases came from Parthia and Carmania and not from their actual sources.

That Taxila had also trade-relation with South Russia at least in the Śaka-Parthian period is evidenced by some finds here, a few pieces of gold jewellery and other minor antiquities which show their similarity with the contemporary art of South Russia.[52] The northern route rounding the northern shores of the Caspian and passing through the country of the Aorsi to Bactria, Kapisi and Taxila might have carried the traffic. But as Bactra was long under the Yuechis and as the Yuechis were at war with the Parthians, the Parthians diverted their traffic further to the west, i.e., to the Merv-Herat-Farah-Seistan route or to a bypass from Merv down the Murghab valley to the Paropamisadae. However, the ornaments of the Black sea region were readily sold in the Śaka-Parthian marts of Taxila, as they were more impressive for their beautiful designs and they were made of pure and heavy gold. Pliny[53] also speaks of the Oxo-Caspian trade-route and indicates Taxila's commercial touch with the Black-sea and Caspian region. Tarn however, rejects the idea of the existence of any such trade-route from India in Greek times;[54] but opines that in Strabo's[55] own time there existed a trade-route from the east to the Black-sea, with the Aorsi as the middlemen.

51 " " "p. 477-8.
52 Marshall, Taxila, Ch. 30. p. 616.
53 Pliny, VI. 52.
54 Tarn, G.B.I, p. 490.
55 Strabo, XI. 506.

The Periplus (48) speaks of trade in spikenard "from the Upper country coming through Poclais" and thus hints at the use of the Taxila-Ozene-Barygaza route. While Gondopharnes was ruling in Peshawar in 45 A. D. (according to Fleet), trade was carried on briskly in his dominion extending from Afghanistan to Sind; because Taxila, the most important nerve-centre of the northern India and Barbaricum were brought under the same rule and because each of these served as the chief emporium for inland and foreign trade. It is worthy to note that the Parthian king, like his predecessors, the Greeks and Śakas, fixed his attention on that portion of India, the Lower Indus valley and Peshwar with a part of Eastern Gandhāra which was well-watered, fertile and productive enough to yield a lot and which regulated India's commerce with the west and the countries on the north. Epigraphic and numismatic evidence proves that the Parthian rule over Afghanistan, the Punjab and Sind was soon replaced by that of the Kushāṇa kings. Taxila soon fell into the hands of the Kushāṇs; as an inscription[56] of the year 136 mentions the establishment of the relics of the Buddha in Taxila" for the bestowal of perfect health on the mahārāja Rājātirāja Devaputra Kushāṇa." The Sui Vihar and Mahenjo Daro Kharosthi inscriptions prove the Kushāṇa conquest of the lower Indus valley. Thus practically the same region arrested the attention of the Kushāna kings for its economic importance and the conquests of the Kadphises kings opened up the path of trade between China, India and Rome.

Ptolemy [57] mentions 'Taxiala' as a city in the Arsa territory and not as a mart. This shows that Taxila played more the part of a city than that of a mart in the 2nd cent. A. D., perhaps because Taxila's market-life began to decline since the opening of the sea-route to India from the west.

56 Lud. 21.
57 Ptol, VII. 1. 45.

ŚĀKALA:— The Mahābhārata[58] mentions it as the capital of the Madras. It was also an important town of the Maurya empire under Aśoka who had a stūpa[59] built there.

The Jātakas show that the Madra princesses were sought in marriage by the great Kṣattriya houses of N. India. The Mūgopakkha Jataka[60] speaks of the union of the Madra princess with the king of Benares. The Kaliṅga-Bodhi[61] Jātaka also speaks of the matrimonial relation between the royal houses of Madra and Kaliṅga. Hence in the period of the Jātakas Śāgala had chance to come in closer contact with Benares and Kaliṅga. We may naturally expect trade carried on between these places.

The Macedonians destroyed it but Demetrius rebuilt it and called it as Euthydemia in honour of his father.[62] Menander is the only Greek king who has been immortalised in Indian literature and who ruled from Śākala. The Milindapañha gives a splendid description of this Madra capital: "There is a great centre of trade called Sagala, the famous city of Yore in the country of the Yonakas. Śāgala is situated in a delightful country, well-watered and hilly, abounding in parks, and gardens, groves, lakes and tanks, a paradise of rivers, mountains and woods. Wise architects have laid it out. Brave is its defence, with many strong towers and ramparts, with superb gates and entrance archways and with the royal citadel in its midst, white-walled and deeply moated. Well laid out are its streets, squares, crossroads and marketplaces. Its shops are filled with various costly merchandise. It is richly adorned with hundreds of alms-halls and splendid with hundreds of thousands of magnificent mansions[63]... The passage goes on to describe the traffic of elephants, horses,

58 Mbh. II. 31. ("Tataḥ Śākalamabhyetya H. D. S. Madrānāṃ puṭabhedanaṃ").
59 Beal, I. 172.
60 Jat, VI. p. 1.
61 Jāt, IV. pp. 228 ff.
62 Ind. Ant, 1884 p. 350 and Rapson, C. H. I., Vol. I. p. 401.
63 Milinda, pp. 1 & 2; S.B.E. Vol. 35, pt. I. - pp. 1-3.

carriages and pedestrians .... the rich produce, precious metals and delicacies which are to be found in the city. The same source (p. 2) records that shops at Śāgala were stored with Kāsī and Kotumbara cloth. Menander's coins were found circulated at Barygaza even by the author of the Periplus in the 1st cent. A. D. and hence we may infer that during the period of Menander trade between Śāgala, his capital and Barygaza might have flourished briskly.

The absence of the Athena Alkis on the coins struck by Manues leads Tarn[64] to surmise that Maues did not occupy Śāgala of Menander. Śākala was most probably conquerred by his successor Azes I, and was easily connected with Taxila and Barbaricum which were within the Śaka empire. It is interesting to note that Śāgala was reputed for her cotton cloth. The rich people of the north known as Audumbaras manufactured a fine cloth, Kotumbara and traded them to Śāgala.

Ptolemy[65] mentions the city of "Śāgala, otherwise called Euthemedia" in the country of the Pandouoi, definitely the land of the Pāṇḍavas.

Śāgala stood on the national highway of the north in between the Piposhe (Bipās) on the east and the Indus on the west. As reported by Yuan Chwang,[66] this river valley produces, besides rice and spring-wheat, "gold, silver, bell-metal, copper and iron" and the people here "wear a very shining white fabric, Kauśeya (silk.)" The "glossy white clothing made of silk, muslin etc." of Yan Chawng speaks of wonderful improvement of textile industry of the locality. Thus the very situation of śāgala in the fertile doab, producing both agricultural and mineral products and its connection with the land route, the Uttarāpatha and also with riverine routes helped to the growth and development of the town as a first-class mart, as evidenced by the Milindapañha mentioned

64 Tarn, G.B.I. 322-330.
65 Ptol, VII. 1. 46.
66 Beal, 1. p. 165.

above. The name of Miiinda is connected with the origin of the most famous statue of the Buddha in Indo-China. This by itself proves nothing, but it possibly shows some sort of connection between the Yavana ruler and the region of S. E. Asia. When, on the other hand, we find in the Milinda-pañha, how India's economic connection was developed with S. E. Asia, possibly in this period, then it is not unlikely that Śākala, the capital[67] of the king played an important part in this Far Eastern trade.

MATHURĀ:—Megasthenes, the celebrated Greek ambassador in the court of Chandragupta Maurya states that Heracles was worshipped in the country of the Saurasenoi who had two big cities, Methora and Chrysobera. This is perhaps the earliest account of the city of Mathurā by a foreign writer. The Great epic[68] also speaks of this place where Nārāyaṇa will take birth as Krishṇa. Hence we may presume that this city owed its rise and development as a place of pilgrimage. Though the Buddha[69] viewed the city with distinct disfavour, Mahā Kacchāna liked it and preached Buddhism[70] here. After 300 B. C. Madhura became a centre of Jainism, as proved by numerous inscriptions discovered in Kaṇkāli Tilla.[71] Thus gradually this place became prey to different currents of our ancient religions. Buddhist theologians made complaints about the absence of amentities in Mathura. They were apparently not much interested in its kettledrums or in the śūṭakas (garments) and kārshāpaṇas (coins) of which Patañjali[72] speaks in his Mahābhāṣya.

Cunninghum refers to finds of Apollodotus's coins in the Lower Punjab, Sind, Gujrat, Kornal near Delhi, Roh, Push-

67 Whitehead thinks that Śāgala was not the capital of Menander, as it was not a mint-city. The theory however, goes against the available literary evidence.

68 Mbh, (Calcutta) XII. 340. 12954.

69 Madhurā sutta, 2.

70 „ „ „ 1.

71 C.H.I, Vol. I, p. 167.

72 Mahābhāṣya, 1. 2. 48.

kar, Amarkot, Bajaur, Mathurā,[73] Bundelkhand. Taxila and Barygaza. Thus we see that coins of Apollodotus got circulated in such areas as to show that Mathurā had a very lively trade with Taxila, with the ports of Sind, Gujrat and Barygaza in the period of Greek rule. The Milindapānha[74] also refers to Mathurā as one of the chief cities of India and thus hints at its economic importance. Przyluski[75] has stated that Menander's empire extended from Mathurā to Barygaza. Hence Mathurā became one of the Greek cities pulsating with trade and commerce and many Greek coins[76] are found out in the Mathurā-Delhi country.

Mathurā became also the playground of the Śakas. Coins of Rājula and coins and inscriptions of Soḍāsa have been found out in Mathurā. The Mathurā insrciption[77] shows how attention of Soṃdāsa was paid to works of public welfare and how "a tank, the western tank of the twin tanks, a reservoir and a garden" were made by his treasurer. This shows how under the Kshatrapas in the beginning of the Christian era Mathurā was enriched with tanks and reservoirs which might have been utilised also for the purpose of irrigating fields for improvement of agriculture.

Next under Kaniṣka who had established his rule over a wide realm extending from Kapisa, Gandhāra and Kāshmira to Mathurā and Benares, Mathurā had a very fair chance of winning prosperity by trade. The position of Mathurā on the Yamuna on the main G. T. road from Pāṭuliputra to Taxila, which, again, was joined by routes from S. India, Barygaza and Barbaricum-Patala, helped its commercial rise to no mean degree. Besides, "the vast amount of sculptural remains discovered at Mathurā would suffice to show the importance of this place in the history of Indian art. The Sat-

73 Whitehead, N.N.M. p. 45.
74 Milinda, p. 331.
75 Aśoka, p. 167.
76 Whitehead, N.N.M. p. 45.
77 Luders No, 82.

raps who ruled at Mathurā, patronised the arts of architecture and sculpture as it appears from the inscribed Lion capital in the British Museum. The great flourishing period of Mathura School undoubtedly coincides with the reign of the Kushāṇa rulers, Kaniṣka, Huviṣka and Vāsudeva."[78] Hence we may conclude that Mathurā, where grew up a school of sculptors, strongly influenced by the Greco-Buddhist art of Gandhāra under the Kshatrapas and the Kushāṇas, might have been definitely a big market town pulsating with life and culture.

Now let us see the inscriptions from Kaṇkālī-Tīlā which have ample references to Kaniṣka and his dynasty and to the Jains and which smell of commercial and industrial life of the locality.

Epigraphic evidence is strong enough to prove the commercial importance of Mathurā in the period of our enquiry. The Jaina image Inscription of Mathurā[79] speaks of the dedication by Dharmmasómā, the wife of a caravan-leader and it suggests that the caravan-leader might have prospered much in trade so as to make this gift. The Jaina image inscriptions[80] of the same place indicate the existence of trade in perfume by the mention of the dedication of a fourfold image of the Arhat by Jitāmitrā, mother of the perfumer (gandhikā) and by that of the gift of and image of Vardhamāna by the perfumer Kumārabhaṭi. Next, we hear of a banker (śreṣṭhin) Aryya Rudradāsa, son of the banker Śivadāsa who is recorded to have set up the elephant Naṁdiviśāla in the Mathurā Jaina capital inscription of the time of Mahārāja Devaputra Huviṣka. Metal-working was an important industry of Mathurā, as we find mention of two workers in metal, (lohikakāruka), Sūra and Góva who had also dedicated images.[81] Trade in perfumes was carried on even during the period of Vāsu-

78 A.S.I, 1906-7, p. 142.
79 Lüders No. 30.
80 „ „ 37 & 39.
81 „ „ 53 & 54.

deva when an image was dedicated by Jinadāsī, wife of the "perfumer Vya .... cha."[82] The treasurer Dēva is mentioned in the Mathurā inscription[83] which records the "setting up of an image of Bhagavat Vārdhamāna .... by the daughter of the treasurer." Goldsmiths were also not wanting in Mathurā and one of them Naṁdighosha is said to have set up tablets of homage in a bhaṁḍira.[84] Mathurā was a sacred place and naturally it attracted pilgrims from different quarters. Now these inscriptions of Mathurā, as mentioned above, show dedications of devotees belonging to the commercial section of the community and though some of the donors might have hailed from a distance, it may not be unlikely that Mathurā itself was a rising town where commerce played its part equally prominently as its religion and where different arts and crafts flourished, specially in the Kushāna period. While Ptolemy[85] mentions "Modoura as the city of the gods," it may not be unreasonable to think that it was really a sacred city of temples and best specimens of sculpture. The epithet indicates practically its position as a centre of culture and allround progress and prosperity in the middle of the 2nd cent. A. D..

It is interesting to note that Kauṭilya[86] speaks of cotton industry of Madhurā and this fact of the 3rd cent. A. D. is confirmed by Yuan Chwang[87] who records. "The country of Mathurā ..... produced a fine striped cotton cloth and gold." The account of Fahien may also be noted here. "The people of this country killed no living creatures, drank no wine and ate no onion or garlic. There were no butchers or wine-sellers in the markets." This account smells of Buddhist or Jain influence and perhaps as a result of stress upon non-violence sale of meat and wine was strictly prohibited. Shells

82 „ „ 68.
83 „ 74.
84 „ „ 95.
85 Ptol, VII. 1. 50.
86 Kau, II. XI. 81.
87 Watters, p. 301.

were also used as currency like coins, perhaps meant for the Indian community.

KAUŚĀMBĪ:—Its antiquity may be traced to the period of the Śatapatha Brāhmaṇa[88] which mentions a pupil bearing the epithet 'Kauśāmbeya' meaning a native of Kauśāmbī. The Mahā-*P*arinibbāna-sutta[89] mentions Kauśāmbī as one of the six principal cities of N. India in Buddha's time. That Kauśāmbī was a first-class market-town in the days of the Buddha, is attested by Buddhaghosa who speaks of three Banker friends, Ghosita, Kukkuta and Pavarika. These three heads were the business-magnets of the town. They went from Kauśāmbī to Śrāvastī on elephants only to wait upon the Lord who was then staying at Jetavana. The Buddha accepted their invitation and agreed to go to Kauśāmbī. The three bankers built near Kauśāmbī at high cost separate monasteries which were marked and described by Yuan Chwang.[90]

The Paramatthajotika[91] derives Kauśāmbī as the dwelling place of Kośamba the sage, and thereby seeks to suggest that the city was at first a hermitage or a religious colony around which the city grew up subsequently[92] Asvaghoṣa speaks of this hermitage with reference to this city.

The Jaina tradition[93] seems to suggest that Kauśāmbī came to be known as such, because it abounded in large-sized Kośamba trees providing cool shade.

According to the Suttanipāta[94] the journey of Bāvarī's disciples from Paṭitthāna to Rājagaha had one of the halting stations at Kauśāmbī on the same high road which led the travellers to Śāketa and Śrāvastī. Śāketa could be reached from Śāvatthi by a relay-drive of seven chariots.[95] It was

88 Sat. Brāh, XII. 2.2.13.
89 Dighana, II. 146, 169.
90 Watters, I. p. 369.
91 Paramattha, Vol. II. p. 300.
92 Cf. Law. Śrāvastī in Indian Lit, p. 6.
93 Vividhatīrthakalpa, p. 23.
94 VV. 1010-13.
95 Majjhima Nik, I. p. 149.

definitely by this route the Lord Buddha or his disciples journeyed from Śāvatthi to Kauśāmbī and back via Śāketa. The Vinaya Chullavagga (Khandaka 12) of about the 3rd cent. B. C., records the journey of Bhikkhus by a land-route from Kośāmbī to Sahajāti via Ahogaṅgā and Kānnakujja. The same source records also a journey of certain Bhikkhus by a boat from Veśāli to Sahajāti, Mr. N. N. Ghosh in his 'Early Hist. of Kauśāmbī (p. 8) notes that Sahajāti was the nearest river-station of Kauśāmbī down the Jamunā river near its confluence and that it is identified with Bhita, about 8 miles from Allahabad. Thus to sum up the whole thing, we may say that with such facilities of communications, both by land river routes, Kauśāmbī could not but be an emporium of inland trade of Ancient India. Roads coming from the S. W. and N. W. met at Kauśāmbī for import and export of goods from these places. Rhys Davids thinks that in the age of the Buddha Kauśāmbī was the greatest river port for exchange of goods for the entire north and mid-India and it had commercial intercourse with Burma[96] and he draws our attention to the existence of millionaire merchants in Kośāmbī[97] in those days.

The accounts of the Chinese pilgrims may help us in locating the ancient town of Kauśāmbī. Fahien went from Sarnath to Kośāmbī, about 13 yojanas, i.e., 91 miles; whereas Yuan Chwang went from Prayāga to the country of Kauśāmbī, walking "south-west through a forest .... a journey of above 500 li (about 100 miles) [98] Watters, however, has conclusively shown that the Life and Siyuki of Yuan Chwang agree as to the distance and direction of Kauśāmbī from Prayāga, i.e., above 500 li S. W. of Prayāga. But this distance mentioned in the actual records of the pilgrim was most probably the distance between Prayāga and the country of Kauśāmbī instead of the real city. The distance and direction of Kauśāmbī

96 Buddhist India, p. 104.
97 ,, ,, p. 102.
98 Watters, p. 365.

from Sarnath may be accepted as fairly correct, as the distance of 13 yojanas is still marked in the present road joining the two. Dr. B. C. Law[99] draws the attention of the readers to the fact that "Kośam, which is supposed to be the site of Kauśāmbī is about 30 or 31 miles from Allahabad across the fields, 137 or 138 miles by road, above the Yamuna." This identification of the present Kośam with the ancient Kauśāmbī is confirmed by an inscription,[100] on a stone pillar at Kośam, dated Saṁvat 1621, (according to Fleet. 1565 A.D.), which refers to the locality as Kauśāmbīpurī. "The remains at Kośam include those of a vast fortress with earthen ramparts and bastions."[101] Rapson[102] says that "it was also an important commercial centre, as is indicated by the extraordinary variety of the coins found there."

Patañjali refers to Kauśāmbī by way of illustrating the sūtra of Pāṇini II. 1. 18. in his Mahābhāṣya belonging to the period of the Suṅga emperors. Patañjali illustrates the Vārtika 'Nirādayaḥ Krāntādyarthe Pañchamyāḥ' on Pāṇini's sūtra 'Ku-gatiprādayaḥ' by two examples Niṣkausāmbīḥ' and 'Niṛvārāṇasīh,' 'one who has gone out of Kauśāmbī and one who has passed away from Vārāṇasī. The historical value of these examples lies in the fact that these two cities gained preeminent positions so as to crop up readily in Patañjali's mind and that they had established themselves as centres of trade and traffic and stages of travel in the 2nd cent. B. C.. Patañjali comments on Pāṇini III. 3. 136 as follows:—

(a) "Yo yamadhvāparimāṇo gantavyastasya yadavaraṃ Sāketāditi" - -" Of the measure of distance to be travelled upto Pāṭaliputra, for that portion which is nearer to Sāketa, the tense should be "sāmānyabhaviṣya" e.g. "Bhokshyāmahe."

99 A.S.I, Memoirs. No. 60. 1939.
100 Ep. Ind, XI. pp. 91-92.
101 Imp. Gaz, XV. p. 407.
102 C.H.I., Vol. I, p. 472.

(b) "Yo yamadhvā Pāṭaliputrād gantavyastasya yaṭparaṃ Sāketāditi" - - "For the portion of the journey away from Sāketa but nearer to Pāṭaliputra, the tense should be" anadyatanabhaviṣya. e.g., 'bhoktāsmahe'.

From these instances we come to learn of an oft-frequented trade-route between Sāketa and Pāṭaliputra with intermediate halting stations at Kausāmbī and Vārāṇasī.

The Brāhmī inscription at Kośam records the erection of a stone-railing by a certain householder named Gotiputa, grandson of "Vāri, a caravan-merchant" (E. I. XVIII. N. 20. p. 159) and shows thereby the importance of Kauśāmbī as the centre of caravan-trade. A considerable number of coins, terracotta figurines and moulded animals, heads etc. unearthed, belonging to the period from the Mauryas to the Guptas, show the economic importance of this place.

An unique specimen of jug has been unearthed from Ahichchatra. Its "all the characteristics are alien to the indigenous potter's craft and suggest that the vessel was an importation, probably from the Mediterranean" (A. I.—Ancient India-Bulletin of A.S.I.- I. 1946, p. 48). This shows that Kauśāmbī along with Bhita and Ahichchatra was the centre of international trade during the Gupta period. Kauśāmbī is also mentioned in the Bṛhatsaṃhitā - XVI. 31.

The textile industry of Kauśāmbī in the 3rd cent. A. D. is attested by Kauṭilya who mentions that "of cotton fabrics those of Vatsa are the best" (As-II. XI. 81) and by Yuan-chwang who reports that "the country of Mathurā produces a fine species of cotton fabric". Kauśāmbī was noted also for rice and sugar-came (Beal. I.235).

KANAUJ:—The high antiquity of the town is attested by the Rāmāyaṇa (Bālakāṇḍa) which describes the origin of its name: "Yad Vāyunā cha tāḥ kanyāḥ tatra kuvjīkṛtā purā, Kānyakuv - jamiti khyātaṃ tataḥ prabhṛti tat puraṃ".

The town was also called Mahodaya meaning "of high prosperity" (Rāmā, Bālakāṇḍa, canto 32. v. 6. Cal. 1881). The Mahābhārata also speaks of Kuśasthala, which evidently

stands for Kanauj, as one of the five towns which Yudhiṣthira claimed for as one of the compromising terms given to Duryodhana (Mbh. V. 30. 19 - ed. P. C. Roy) and this suggests its importance even at that period. The Mahābhāṣya also refers to it by the term "Kāṇyakubjī" (Kielhorn - Mbh.- II. p. 233). Ptolemy mentions it twice as "Kanagora and Konagiza" (ed. S. N. Majumdar. p. 134, 227-28), as one of the seven towns of the Eastern area (Prasiake). Fahien came to this city bordering on the Ganges but during the Gupta Period it could not assert its importance before Pāṭaliputra which was still in the height of its prosperity. However, the next century witnessed the rise of Kanauj as another political centre, when Harsha became the paramount ruler of North India. The wealth and prosperity of Kanauj is reflected in the description of Yuan Chwang; "The capital borders on the river Ganges. It is about 20 li in length and 4 or 5 li in breadth. The city has a dry ditch round it, with strong and lofty towers facing one another. The flowers and woods, the lakes and ponds .. ... Valuable merchandise is collected here in great quantities. The people are well-off and contented, the houses are rich and well found. "(Beal. I.206-7. He records about clothes that " they use ornamented and bright-shining fabrics". The houses were white-washed and painted on special occasions (H. C. -C. T. "Rājyaśri's marriage" p. 124). Watters refers to "light duties at ferries and barrier stations; paid by traders, while bartering their goods (I. p. 176) in the kingdom of Harṣa and this light taxation might have facilitated trade and commerce under Harṣa.

The Madhuvan and Banskhera grants speak of the tax called Tulyameya, i.e., taxes depending on the weight and measure of the commodities; and indicate the interest of the government in the increase of trade and commerce. The benevolent measures adopted by Harṣa, as reported by Yuan Chwang (Beal. I. 214) that "in all the highways of the towns and villages throughout India, he erected hospices, provided with food and drink and stationed there physicians, with medicines

for travellers and poor persons round about; might have made the journey of merchants much easier and safer in Harṣa's dominion and this must have facilitated trade in or with Kanauj.

BENARES:—Benares was an important city in the period of the Lord Buddha, as it was one of the six cities of N. India, which was reckoned by Ānanda as a fit place for the final passing away of the Buddha.[103] The extent of the city mentioned in the Jātaka[104] was 12 yojanas. It was a great centre of trade and industries and trade-relation existed between it and Taxila.[105] It was a most populous and prosperous country.[106] Its superiority over other cities is highly spoken of in a number of Jātakas, specially the Guttila Jātaka No. 243. The Mahāvagga[107] records the fact that this city was formerly reputed for its immense resources. Benares tops the list of twenty famous cities mentioned in the Abhidhānappadipaka. The Jātakas speak of trade-guilds each headed by a president (pamukha) or alderman (jeṭṭhaka) and sometimes these heads quarrelled among themselves. "It may have been such quarrelling also at Benares that led to the institution of a supreme headship over all the guilds, an office doubled with that of a treasurer being founded at that city."[108] The Gurtila Jātaka[109] shows concerted action on the part of Benares traders. We hear of caravans bound from Benares, passing through the deserts of Rajputna westward to the seaports like Bharukaccha and Barbaricum, which were again connected with Babylon.[110] Benares was also connected with the port of Kaveripattinam and the defaulting woodwrights reached the ocean-island from Benares.[111] Again, in the Silanisaṃsa

103 Digha Nik, II. 146.
104 Jat, IV. 377; VI. 160.-"dvādasayojanikāya Bārāṇasiyaṁ".
105 Dhammapada Comm, III. p. 429.
106 Ibid, III. 445.
107 X. 2. 3.
108 C.H.I. p. 184.
109 Jat. II. 248.
110 Jāt, III. 188; IV. 137; Dip. IX. 26.
111 Jāt, IV. 159.

Jātaka[112] a sea-fairy as helmsman is recorded as carrying "passengers for India" by ships "from off the sea to Benares by river." A number of Jātaka stories[113] mention merchants and businessmen taking ships at Benares. Thus it is not unlikely that in the later days of the Mauryas and in the early days of the Suṅgas she already established herself as a flourishing centre of commerce and crafts, highly organised corporately and locally, under conditions of individual and corporate competition and she had linked herself with Taxila, Bharukaccha and Kaveripaddinam, the important gateways to trade with the outside world. She grew up a great centre of textile industry,[114] famous for fine silk and muslin fabric in these days. We hear of a street (Vīthi) of the ivory-workers[115] in Benares as an instance of the localisation of industries. The Anilacitta Jātaka (156) mentions a guild of weavers living near Benares. The Guttila Jātaka (243) mentions ivory merchants of Benares moving to Ujjain. Not far from Benares lay a carpenters'village (vaddhakigāma) where lived 500 carpenters.[116]

Benares stood on the Ganges and was connected with Vaiśālī (Samantapāsādikā) by a land-route to the north and with Kauśāmbī on the Jumna to the west by a river-route.[117] Rhys Davids[118] draws our attention to the trade-route "from Benares down the river to its mouth and thence on to Burma."[119]

Kāśī-cloth is found mentioned in the Milindapañha,[120] as stored at shops of Suppāraka, most probably for export by sea-routes. Silk-cloth of Kāśī is also mentioned in the Divyā-

112 Jāt. II. 112.
113 Samudda-vāṇija Jātaka and Śaṁkha J. - IV. 159, No. 466; 15-17, No. 422.
114 Mayhaka Jā, 390.
115 Jāt, I. 320; II. 197.
116 Jāt, II. 405.; IV. 159.
117 MA, ii. 929.
118 Bod. Ind, p. 104.
119 Jāt, IV. 15-17.
120 Milinda, p. 222.

vadāna, Benares is also famous for sandal-wood mentioned in the Milindapañha,[121] Dr. Fick[122] notes in the texts of the Jātakas[123] the cases of "horse-merchants who come from the north (Uttarāpathakā assavāṇijā) and sell their horses in Benares." The Lalita-vistara[124] speaks of cloth of Benares as the best. Kauṭilya[125] also mentions linen and cotton-fabrics (kshauma) of Kāśī as the best in quality. He speaks of various kinds of diamond of which one is "Kāśmaka," i.e.,[126] that which is found in the country round Benares.

Benares was the most important business-centre where converged a network of highways leading eastwards to various points in Bengal and specially to her seaport Tāmralipti. The commercial importance of this place, as it had been in the early centuries of the Christian era, continued even in later ages. Benares was one of the provincial centres of the Gupta empire, where a new culture manifested itself, as evidenced by the renowned Gupta school of Sculpture which played its best part in Sarnath. The antiquities of Benares, recently unearthed near Rājghat speaks of works of art of the Gupta Period. Itsing who landed at Tāmralipti in 673 A.D. reports that while he took the road from the seaport "straight to the west," many hundreds of merchants accompanied him in his journey to Bodh Gaya.[127] A rock-inscription of a chief named Udayamāna records that merchants from distant quarters like Ayodhya used to frequent the port of Tamluk for purposes of trade[128] These routes which served as the principal means of communication between Bengal and N. India, met at Benares. Hence for this economic importance of Benares, it may not be unlikely that Benares has been men-

121 Milinda, p. 243-48.
122 Social Org. in N.E. Ind, trans. by S. K. Maitra, p. 274.
123 Jā, I. 124; II. 31, 287.
124 Lalitavistara, Ch. 15.
125 Kau, II. XI. 81.
126 ,, ,, 77.
127 Itsing, xxxi.
128 Ep. Ind, II. 345.

tioned as the point of demarcation between the Madhyadeśa and the Prāchya country in Kāvyamīmāṇsā ("Vārāṇasyāḥ parataḥ Pūrvadeśaḥ"); though in earlier days, according to Manu, Vasiṣtha, Bodhāyaṇa and the Kūrmavibhāga, the Prāchya country lay to the east of Prayāga. It may be noted here that the Purāṇic and Dharmaṣāstra-writers laid more emphasis on the culture of the Madhyadeśa and hence they demarcated Prayāga as the eastern boundary of the division, while Rājaśekhara and others emphasised evidently on the economic aspect. Had the earlier writers taken the economic life into consideration, it is not unlikely that they also would have marked Vārāṇasī as the eastern boundary of the Madhyadeśa.

Yuan Chwang[129] records - "The city-wards were close together, the inhabitants were very numerous and had boundless wealth, their houses were full of rare valuables .... The harvests were abundant, fruit and other trees grew densely and there was a luxuriant vegetation." Hence it is clear that the economic importance of Vārāṇasī continued unabated even in the 7th cent. A. D. when the Chinese pilgrim's attention was arrested by her richness in agricultural and commercial outputs.

PĀTALIPUTRA:—Arrian[130] on the authority of Megasthenes speaks of Pāṭaliputra as "the largest city in India in the land of the Prasii, where is the confluence of the river Erannobaos (hiraṇyavāha, i.e., the Sona) and the Ganges." He also describes the city as "extending 80 stadia, x 15 stadia, surrounded by a ditch and a high wall." His account is interesting enough to give us a picture of the economic life of the age. He says that the administration of Pāṭaliputra was entrusted to six different boards; the first board, supervised industries, crafts, trade-guilds etc., the second looked after the comforts of the travellers, foreign merchants, foreigners visiting India and so on; the fourth supervised the markets, checked weights and

129 Watters, II. p. 47.
130 Indika, X.; Cf. Strabo, XV. 1. 35.

measures and maintained proper prices of different articles of trade and the fifth supervised manufactures and was engaged in preventing adulteration.

Przyuski[131] says," From Maurya times Pāṭaliputra was connected with Gandhāra by an imperial highway, drawn on the model of great roads of the Achaemenids. It played a great part in the political and economic life of India. After the foundation of the Greek kingdom of Bactriana commercial intercourse became very active between the valleys of the Ganges and the Oxus..... From Pāṭaliputra three great roads radiated to the frontiers of the empire - the south-western to Barygaza by Kauśāmbī and Ujjain, the northern to Nepal by Vaiśālī and Śrāvastī and the north-western, the longest to Bactriana by Mathurā and Upper valley of the Indus." Thus the different parts of India were closely bound together under the strong rule of the Mauryas. The country was overspread with a network of roads, all of which led to Pāṭaliputra, as all roads led to Rome. Megasthenes was surprised to see the royal road from the Indus via Pāṭaliputra to the mouth of the Ganges, and Pliny noted its different stages. He has left an account of Pāṭaliputra, the ruins of which lie under the present city of Patna-Bankipore and the ancient rampart of which has been found in situ.[132].

Patañjali's comment on Pāṇini's sutra III. 3. 136 mentions Pāṭaliputra as the destination of the journey from Sāketa via Kauśāmbī and Vārāṇasī. His examples show a most busy trade-route connecting Pāṭaliputra with other marts mentioned in the commentary in the 2nd cent. B.C. Rhys Davids[133] speaks of the trade-route from Sāvatthi to Rājagaha via Pāṭaliputra. He points out, "The route between these two ancient cities is never direct but always along the foot of the moun-

131 Aśoka, p. 9.

132 Cf. Waddell, Report on the excavations at Patna, Cal. 1903; Spooner-Ann. Rep. A.S.I. 1912-13, pp. 55-61.

133 Budd. Ind, p. 103.

tains to a point north of Vaiśālī and only then turning south to the Ganges." Pāṭaliputra has been mentioned as one of the stopping places. We hear of traders going from Magadha to Sovira.[134] The Sāmantapāsādika[135] tells us that Aśoka, starting from Paṭaliputra, with the branch of the Bo-tree, crossed the Ganges by boat and then traversing the Vindhya forest, reached Tāmalitti from which it was taken to Ceylon by a ship. This shows that Pāṭaliputra was also linked with Tāmralipti by a land-route through the Vindhya forest in the days of the Mauryas and the same state of affairs evidently continued in the post-Mauryan period also. The Dīgha Nīkāya[136] (C. 3rd cent. B.C.) informs us that Pāṭaliputra was a mere village, known as Pāṭaligrāma when Buddha visited it shortly before his death. But gradually it gained its importance as a metropolis and also as a seat of commerce. The Petavatthu commentary (p. 271) mentions that trade was carried on between Pāṭaliputra and Suvaṇṇabhūmi. The use of these routes is expected to be continued in the period of our enquiry.

The Barhut inscriptions[137] record the gifts of some Buddhist donors of Pāṭaliputra and indirectly hint at its economic affluence during the period of our enquiry. The power and prestige of the town is also found mentioned in Pliny[138] and in Ptolemy.[139]

The Milindapañha[140] also refers to Pāṭaliputra, 100 yojanas from Śāgala and mentions a "merchant on his way back to that city with 500 waggons." while the merchant saw Nāgasena, he is said to have sent on his waggons in advance and followed him (Nāgasena).

134 V.V.A, 370.
135 Sāmanta, pp. 96-97.
136 D. N., II. pp. 72-168.
137 Liid. Nis. 719, 816, and 818.
138 Pliny, VI. c. xix.
139 Ptol, VII. 1. 73.
140 Milinda, I. 32-34.

Pāṭaliputra was connected with China by two overland routes, one at the earlier stage by the Assam-Burma-Yunnam route and the other through Nepal and Tibet. We know from the report of Chang Kien that "commodities of S. W. China were being carried through N. India as far as Bactriana as early as the 2nd cent. B. C."[141] . "The Assam-Burma route to China started from Pāṭaliputra, passed by Champā, Kajaṅgala and Puṇḍravardhana and proceeded upto Kāmrūpa." From Assam the route ran in three ways to Burma and met at Bhamo and then proceeded through hills and valleys to Yunnanfu (Kunming) in S. China.

Lévi finds an echo of the Murunda occupation of Pāṭaliputra in the Chinese works. From these sources we learn that during the reign of the Wu dynasty (220—277 A.D.) the king of Funan named Fan Chen sent Su-wu as ambassador to India. The Indian king gave him a hearty welcome and afterwards he sent Chen-song to Fan Chen. Chensong met Kongtai, the Chinese ambassador to Funan and reported to him of India — "The title of the king is Meou-loun. The Capital .... has a double wall of ramparts ....In the roads, markets, towns, there are clocks and drums etc."[142] Lévi identifies Meou-loun wiht Muruṇḍa. Cunningham takes the capital to be Pāṭaliputra.[143] The above account shows that Pāṭaliputra under the Muruṇḍa king had established relationship with Funan in the east and that it was a well-fashioned market-town with roads, and clocks.

The Lalitavistara[144] speaks of "kāṃsya-pātrī (vessels of bell-metal). Mines of diamonds and fibrous garments are att-

141 India and China, (Dr. Bagchi.) p. 18.

142 Jour. Gr. Ind. Soc. 1943.

143 The distance 7000 li covered by the travellers up the river shows that the capital may have been situated further up to the west of that city. But as in the period Pāṭaliputra was the largest town in the Gangetic valley, Cunningham's identification may not be improbable In that case we have to assume that the measurement of 7000 li is only an approximate one.

144 Lalitavistara, Ch. 21. "Māgadhikānāṃ kāṃsyapātrī."

ributed to Magadha in Arthaśāstra, p. 78 n and p. 82 respectively. Kauṭilya[145] refers to 'weights of iron or of stones' available in Magadha. Whatever he speaks of Magadha is naturally expected to indicate the economic resources of her capital Pāṭaliputra and her trade in these articles, well-regulated by standardised weights and measures in the 3rd cent. A.D..

Yuanchwang speaks highly of rice of this place, "the grains of which are large, scented and of an exquisite taste." (Beal II. p. 82). We hear of a large number of carpenters (Act ii) and of Vishnudāsa (Act. VI) at Kusumapura (Pāṭaliputra) from the Mudrārākshasa. Excavations at Pāṭaliputra have yielded a number of beads from the Maurya to the Gupta era. Fahien noticed the ruins of "the walls, doorways and the sculptured designs" of "no human work" of the royal palace of Aśoka, "the people were rich and prosperous" during his time and "the nobles and house-holders of this country (definitely some of them of the Vaiśya class) had founded hospitals within the city to which the poor of all countries" .... might "repair". He also refers to the skill of carpenters here, who made a five-storied bamboo structure on a four-wheeled car for the procession of the image of Buddha. (Beal I. introduction XXVI), Kālidāsa also refers to Puṣpapura, (Raghu VI. 24) the metropolis of Magadha, and to its position at the confluence of the Ganges and the Śoṇa ("Bhāgīrathīśoṇa ivottaraṅgaḥ:—Raghu VII. 36), which might have helped her trade by river-traffic. This shows the economic importance of Pāṭaliputra in the Gupta period. Bloch suggests on the evidence of Basārh seals that Pāṭaliputra might have had something like a modern Chamber of Commerce (A.S.I. 1903-4. p. 104).

Yuanchwang speaks of the old ruins of the towns, of the monasteries, Devatemples and of stūpas. Of course at his time the town was a small one with only 1000 houses.

145 Kau, Bk. II, Ch. XIX.

CHAMPĀ:—Champā, the ancient capital of Aṅga was situated on the river (mod. Chāndan) of the same name[146] and the Ganges,[147] at a distance of 60 yojanas from Mithilā[148]. Cunningham[149] points out that Champā is represented by two villages, Champānagara and Champāpura near Bhagalpur which exist still today. Its location near the Lakhisarai station on the the Eastern Railway is suggested by the inscriptions. (J.B.R.S., vol. XLI, pt. 2, p. 8). The city is mentioned as a place of pilgrimage in the Mahābhārata [150] and hence its importance as a pilgrimage might have enhanced the prestige of its commercial life to no mean degree. Its old name was Mālinī[151] and it might have owed its new title to the fact that it was surrounded by groves of Champaka trees towards the end of the period of the Mahābhārata.[152] "It was celebrated for its beautiful lake, named after queen Gaggara, who had had it excavated,"[153] and this lake might have been used for irrigation purposes.

The Mahāparinibbāna sutta (C. 3rd cent. B.C.) recognises the importance of Champā as one of the six great cities of India. Champā was reputed for her wealth and commerce and traders sailed from here to Suvaṇṇabhūmi for commercial purposes[154] and hence its commercial and maritime intercourse with the east before the 2nd cent. B.C. is established. Champā stood on the Ganges which was the most important waterway and so boats plied upto Benares and sailing higher up the Yamuna, reached Kauśāmbī.[155]

146 Jāt, 506.
147 Watters, II, 181.
148 Jāt, VI. p. 32.
149 A.G.I, p. 5.
150 Mbh. (Calcutta ed) Vana, Ch. 84. 8141 ; III. 85, 8156.
151 „ XII. 5. 6-7.; XIII. 42. 16. (P.T.).
152 Anuśāsanaparva, Ch. 42.
153 Buddhist India, p. 35.
154 Jat, VI. 539, ed. Fausball.
155 Bud. Ind, pp. 103-4.

On land Champā was linked with Mithilā, the Videhan capital,[156] standing about 60 leagues off.

The Divyāvadāna (p. 275) which has been ascribed to C. 3rd cent. A. D. states that there was a custom-house between Champā and Rājagṛha for the realisation oof taxes from the public and thereby suggests a brisk trade along the route from Champā to Rājagṛha in those days. We have a beautiful description of sea-faring merchants of Champā from Jaina Nāyādhammakahā (97 ff.) which has been ascribed to the period 3rd cent. B.C. to C. 3rd cent. A.D. and hence Champā's overseas trade in the period of our enquiry is proved beyond doubt.

It is not unlikely that colonists from this city established the great settlement of the same name in Cochin-China in S. E. Asia.[157]

Gerini[158] has pointed out that "adventurers from Northern India, who had reached Tonkin overland by the Song-ka or Vin route," had established a colony named afterwards Champā, of course, the Upper Champā.[159] He says further how "a considerable trade was established and carried on by the Indian immigrants who had come by sea with their mother-country.[160] From this we may assume the prominent part played by the people of Champā of N. India in the colonial and commerical expansion in the East about the beginning of the Christian era.

Champā is mentioned in the Bṛhatsaṃhitā (XVI. 3). Yuan Chwang records the existence of wild elephants near Champā. (Beal. II. p. 193).

The market-towns on the Royal road have been discussed in detail. Now let us enquire into two marts Vaiśālī and Puṇḍranagara which stood on the branch route from Pātaliputra

156 Jat, VI. p. 32.
157 Ind. Ant, VI. 229.
158 Gerini, p. 235.
159 The Lower Champā (mod. Cochin-China) is of South Indian Origin.
160 Gerini, p. 301.

to Assam. After crossing the Ganges at Pāṭaliputra the first mart to be noticed on the Assam-Burma route is Vaiśālī.

VAIŚĀLĪ:—Vaiśālī, "the large city" par excellence is renowned in Indian history as the capital of the Licchavis and the head-quarters of the powerful Vajjian confederacy.[161] We may know from the Vinaya texts,[162] which have been ascribed to the 3rd cent. B.C., that there lay a road from Vesāli to Rājagaha and another from Vesāli to Kapilāvatthu.[163] The road from Sāvatthi to Rājagaha" probably went on to Gaya and there met another route from the coast, possibly at Tāmralipti, to Benares."[164] Hence it may be assumed that immediately before the 2nd cent. B.C. Vaiśālī established itself as a good market-town and linked itself by inland traderoutes with the important centres of trade in N. India. Its prosperity lay in products not only commercial but also agricultural, as the Vinaya texts show its good harvests. The Mahāvastu (C. 200 B.C.—400 A.D.) shows that mango was the most important natural products of the land, as it records the gift of an extensive mango-grove to the Buddhist church by one Ambapālī, the famous courtezan of Vaiśālī. The Rāmāyaṇa (C. 1st cent. B.C.) — 1.45.10 speaks of this city as beautiful enough to rival heaven:— "Viśālāṃ nagarīṃ ramyāṃ divyāṃ svargopamāṃ tadā." The Lalitavistara[165] describes the city as" very large, prosperous, thickly populated and beautiful in all respects."

Coomeraswamy[166] refers to the terracottas of the Suṅga age found at Basarh, like those of Taxila, Bhita and Mathurā. This aspect of art in the life of Vaiśālī in the pre-Christian period throws an indirect light on its economic development.

Spooner, in course of his excavations at Basārh discovered a clay-seal with inscription which sheds light on the relation

161 Buddhist India, p. 40.
162 Vinaya T. II, pp. 210-11.
163 „ III, p. 321.
164 „ T. I, 81; Cf, Bud. Ind, p. 103.
165 Ch. 3.
166 Hist. of Indian and Indonesian art, p. 214.

of Vaiśālī with other cities of Northern and Western India under the Śakas. The clay-seal [167] contains the legend" (the seal) of great queen Prabhudamā, sister of Svāmi Rudrasena and the daughter of Svàmi Rudraśiṁha." The seal is ascribed to C. 200-222 A.D.. It is interesting to note that Probhudamā, born of the Śaka dynasty of Chastana at Ujjain was married to the Muruṇḍa king of Vaiśālī only to strengthen the position of the Muruṇḍa dynasty in eastern India. Hence we may easily imagine the picture of Vaiśālī's trade with Pāṭaliputra and the important towns and ports of the Śakas and the Kushāṇas in India. Ptolemy also mentions[168] "the Maroundai" and the Passalai and the Passalai may be taken to be the tribe of the kingdom of the same name stretching northward from the Ganges along the banks of the river Gaṇḍaki and representing Vaiśālī. The clay-seals of Basārh indicate its importance as a business centre and the activities of various guilds in the Gupta Period. One seal of Basārh represents a large boat with at least three decks and a long oar (A. S. R. 1931-14. pp. 129-30). From this we may assume that Basarh was a very popular centre of water-bourne trade. Yuan chwang notes the fertility of the soil of this place where "flowers and fruits, specially mangoes and bananas are plentiful and much prized." (Beal II. p. 66).

PUNDRANAGARA:—Cunningham, with his topographical instincts had identified Mahāsthān with Puṇḍranagara on the evidence of the Chinese pilgrim, Yuan Chwang. But the discovery of the Mauryan Brāhmī inscription of Mahāsthān now leaves no doubt on this point of identity. The inscription, though fragmentary in six lines of the Brāhmi alphabet is full of historical interest. Dr. Bhandarkar notes on the purport of the inscription briefly as follows.[169] "Some ruler of the Mauryan period, whose name is lost had issued an order to the Mahāmātra stationed at Puṇḍranagara, with a view to re-

167 A.S.I.R, 1913-14. 136. No. 248, Pl. xi. vii.
168 Ptol. VII. 2. 14-15.
169 I.A., 1933, p. 177-8.

lieve the distress caused apparently by famine to a people called Saṁvaṁgiyas, who were settled in or about the town. The measures were adopted to meet this contingency. The first apparently consisted of the advance of a loan in gaṇḍaka currency, and the second of the distribution of dhānya or paddy, from the district granary." (p. 177). This inscription establishes the identity of the present Mahāsthān with the ancient Puṇḍranagara. "The last line of the inscription clearly shows that it was fixed into the structure of a granary which could not have been far from the place where the stone plaque was found. The granary was thus situated in the present area of Mahāsthān. And as the granary originally belonged to Puṇḍranagara, there can be no doubt as to Mahāsthān being identical with Puṇḍranagara.

Mahāsthān, i.e., Puṇḍranagara is situated on a river, the karatoyā. It might have been washed away by the flood, or at least seriously affected by it and that is why gaṇḍaka coins were distributed to meet the contingency of rebuilding or repairing the huts or houses perched on its border. It is interesting to note that this help with money and material was made to the people without any interest. If they had been charged with any, the inscription would have contained some reference to it.

It is a pity that the inscription has not preserved the name of the ruler. But its alphabet and language like those of the edicts of Aśoka lead us to presume that he was a prince of the Maurya dynasty. Hence we have here the earliest reference to Puṇḍranagara as the seat of the Mahāmātra of the Maurya ruler and as the ancient granary of foodgrains like paddy. We may assume that Puṇḍranagara was perhaps an important place in the 3rd or 2nd cent. B.C., enriched with agricultural outputs of the karatoyā valley and with profits of its commercial link with the Maurya metropolis, Pāṭaliputra.

Dr. Bhandarkar opines that "it is not at all unreasonable to conjecture that there were confederate clans in East Ben-

gal," united under the collective term of Saṁvaṁgīyas "and that in the time of our inscription the capital of the Saṁvaṁgīyas was Puṇḍranagara, which was the headquarters, not of the Vaṁgiyas, but of the Puṇḍras, after whom it was undoubtedly called Puṇḍranagara."[170]

It may be noted that a coin of gold has been unearthed at Mahāsthāngarh representing the standard bearded figure of Kaniṣka on the obverse and Nannai on the reverse[171] and showing thereby its importance even in the Kushāṇa period.

Kauṭilya[172] mentions 'gauḍika' variety of silver, which is the product of the country known as Gauḍa. He speaks highly of "cotton fabrics of Vaṁga" to be the best and calls one of the fibrous garments as "Pauṇḍrika[173] Hence we may assume that Puṇḍranagara, capital of the Eastern region inhabited by the Puṇḍras might have traded in these materials about C. 3rd cent. A.D.

Puṇḍranagara, the city of the Puṇḍras was most probably prosperous with sugarcane in those days, as 'puṁri-ākh,' a sugarcane is believed to be derived from Puṇḍra.[174].

The city of Puṇḍra has been referred to by the Divyāvadāna, which, as a whole, has been ascribed to not earlier than the 3rd or 4th cent. A.D., though of course, some portions of it must have been written prior to the 3rd cent.[175] A.D. The Divyāvadāna[176] extends the eastern limit of Majjhimadeśa still further to the east so as to include Puṇḍravardhana and

170 Cf. Ind. Ant. 1933. p. 178. Dr. B, C, Sen has, however, taken the theory of Dr. Bhandarkar on the Mahāsthāna inscription to be "a very bold conjecture" and suggested that "probably the expression Savagīy(ā)naṃ has no geographical or tribal sense, referring on the other hand to those who dweli within a specified portion of Puṇḍranagara. Cf. S.H.A.I.B. - p. 82 n.

171 A.S.I, 1930-34, Part. II. p. 256.

172 Kau, II. XIII. 86.

173 „ II. XI. pp. 80-81.

174 Cf. Beal, II. p. 194 n.

175 Cf. Winternitz, II. p. 285.

176 Divya, pp. 21-22.

thereby suggests the economic importance of this city about the 3rd cent. A.D..

The Bṛhatsaṃhitā mentions the Puṇḍras six times while indicating their good and bad days. (V. 70; IX. 15; X.14; XI. 27,58 and Xvi. 3). The Pāhārpur C. P. of 478-9 A.D. (E. I. XX. p. 59) lets us know of the city-council, headed by the president of merchant-guilds at Puṇḍravardhana, whose permission was required for the purchase of land by the Brahmin Nāthasarmā and his wife Rāmi. This indicates the economic importance of the place in the Gupta period. Moreover, the Pārhārpur inscription shows the considerable demand for land. Nāthasarmā had to purchase land from four different villages, evidently because it could not be procured in a single village. From this we may infer that land was highly valued and nobody wished to part with it; and that the material prosperity of the place under the peaceful rule of the Guptas was established beyond doubt. This fact is confirmed by Yuan Chwang, who reports that Puṇḍravardhana is "thickly populated, rich in grain produces" (Beal II. p. 194).

Bāṇa also refers to silken Pauṇḍra clothes (ch. III. 94) and Puṇḍra sugar-canes (III. 105) in H. C. (C & T).

Next we shall deal with two marts of remarkable importance, Vediśā and Ujjain, which stood on the route branching off from the Royal road at Kauśāmbī and leading south-west towards Barygaza.

VIDIŚĀ:—Vidiśā's commercial life in the period of Aśoka is attested by the fact that his first wife was, according to the chronicles, the daughter of a merchant of Vidiśā-mahāgiri. The Mahābodhivaṁśa calls her Vediśā-mahādevī (p. 116), who made the great Vihāra at Vediśā, probably the first of the monuments of Sāñchī and Bhilsā. Thus we may infer that Vidiśā or Vaiśyanagara which was evidently the old name of Besnagara, was a town of merchants one of whom rose to such a prominence as to draw the attention of Aśoka. Aśoka[177] halted at Vidisā

177 Sāmantapāsādikā, I. p. 79.

on his way to Ujjain to join the post of Maurya viceroy at Avantī, the distance between Vidiśā and Pāṭaliputra being mentioned as 50 yojanas (in the Mahābodhivaṃśa. 98-99). Vidiśā is also noted for its sharp-edged swords.[178] Rhys Davids[179] speaks of the traderoute in early Buddhist period, i.e., C. 3rd cent . B.C. from Sāvatthi to Paṭiṭṭhāna via Vediśā. The letter, read in the last act of the Mālavikāgnimitra shows that Pushyamitra and his son Agnimitra are of Vidiśā and Vidiśā remained the western capital of the Suṅgas after the fall of the Mauryas. The importance of this town was thus due to its character as a metropolis and also "to its central position on the lines of communication between the seaports of the western coast and Pāṭaliputra, and between Praṭiṣṭhāna (Paithan), the western capital of the Andhras on the south-west and Śrāvastī on the north-east."[180]

A large number of Buddhist stūpas known as Bhilsa Topes, including those of Sāñchī with their inscriptions show that they belong to the three successive periods of the Maurya, Śūnga and Andhra rulers. But Rapson[181] speaks of "the first specimens of the early punch-marked coinage" and of "the earliest known example of an Indian inscribed coin which records the name of a king Dharmapāla." unearthed at Eran about 40 miles north-east of Bhilsā and hence the region round Vidiśā claims to have an earlier importance. Copper coins (Kārshāpaṇa) were the standard money of ancient Vidiśā from slightly before the rise of the Mauryas to at least the appearance of the Guptas.[182] These coins found at Besnagar seem to have been struck on a river-bank, in as much as they contain a zigzag sign indicating the course of a river.[183] Dr. Bhandarkar[184] opines that for the increase

178 Jat. III. 338.
179 Bud. Ind, p. 103.
180 Rapson, C.H.I., p. 471. Vol. I.
181 „ „ p. „ „ I.; Pl. V. 1.
182 Bhandarkar, Carmichael Lectures, 1921, p. 88.
183 „ „ „ 1921' pp. 100-1.
184 „ „ „ p. 161.

of the price of copper, the weight of copper coins was reduced at some periods in the ancient town of Vidiśā.

Patañjali[185] makes a casual reference to Daśārṇa in the Mahābhāṣya, the capital of which was Vidiśā on the Vetravatī according to Kālidāsa.[186]

Let us now analyse the inscriptions on Bhilsa Topes to show the economic life of the land. An inscription[187] on one of Bhilsa Topes records the gift of the labourer (Kamika) Aṭha and indicates that the labourers of this place were economically rich enough to donate. Gift of a labourer shows definitely the happy and healthy life of the people. The inscriptions[188] of the same Tope speak of a banker's gift. The inscriptions[189] record the gifts of the wives of the banker of Kandaḍigṛāma. Gift of the merchant Siriguta is also inscribed.[190] The inscription [191] speaks of the gift of the merchant Saghadeva. The inscription[192] testifies to the art of weaving as it records the gift of the weaver Sotika. Another inscription[193] is interesting enough to record that "the carving was done by the Vediśaka workers in ivory" (dantakāras of Vidiśā). The inscription[194] records the gift of Ānaṃda, the son of Vāsiṭhi (Vāsishṭhī), the foreman of the artisans of rājan Siri-Sātakarṇi. This inscription is, according to Rapson[195] placed about the middle of the 1st cent. B.C.. This speaks of the emergence of the artisan class in Vidiśā and of the Sātavāhana rule.[196] Vidiśā's life of commerce was

185 Mbhāṣya, VI. I. 89, p. 69.
186 Meghadūta, I. 23-24.
187 Luders, No. 181.
188 ,, 184 & 283.
189 ,, 206 & 207.
190 ,, 269.
191 ,, 320.
192 ,, 331.
193 ,, 345.
194 ,, 346. (Sanchi No. I).
195 Cf. Marshall, Guide to Sanchi, p. 13.
196 The Sātavāhanas appear to have come into confict with the last Kāṇva king and after winning victory, extended their sway over the Vidisā region.

evidently highly stimulated by its intercourse with the southern India under the Śātavāhanas.

Besides the reference to the art of weaving in the inscription No. 331 as mentioned above, we hear of a village called Kārpāsigrāma[197] in the close vicinity of Vidiśā, noted for cotton and cotton-fabrics. The name of this village is found in three inscribed labels on the railings of Sāñchī Stupa I. The gifts of so many donors of Vidiśā are inscribed on Bhārhut Buddhist pillar inscriptions[198] and they indicate the sound economic position of Vedisa' in the period of our enquiry. Vidiśā is mentioned in the Brhat-saṃhitā (XVI. 32). Kālidāsa refers to a big body of traders, robbed of their wares by a gang of robbers while on way to Vidiśā from Vidarbha. (Mālavikā. Act. V.). Hence we may assume that Vidiśā continued her commercial life even in the Gupta period.

UJJAIN: It was in the west just as Taxila was in the north an important seat of learning and commerce in ancient India. It was situated at the junction of two main routes, one the Barygaza-Kauśāmbī route to Pāṭaliputra and the other coming from the Deccan. It was connected by roads with Taxila and with Barbaricum. Hence Ujjain gathered up and forwarded the trade between the N. W. India, the Ganges valley, the southern and western India. There was a trade route from Ujjain to Benares and the merchants of two cities showed healthy rivalry not only in trade but also in matters of culture.[199] While going with a caravan to Ujjaini Soṇa Kutikaṇṇa met the Peta whose words made him decide to renounce household life (Udāna Comm. 307 f). The road taken by Bāvarī's disciples ran through Ujjainī. Thus Ujjainī was pulsating with life during the early Buddhist period (C. 3rd cent, B.C.), owing to her commercial importance.

Like Taxila, Ujjain was also the seat of a Mauryan viceroy and so was an important centre both politically and com-

197 Luders No. 260 & 515. Cf. B. C. Law, Ujjainī. p. 8.
198 „ Nos. 712, 780, 813 & 835.
199 Jā, ii. 248ff.

mercially under the Mauryas. That is why Tarn[200] believes that it could not have been passed by, while Apollodotus advanced towards Madhyamikā as referred to in Patañjali's Mahābhāṣya[201] after conquering Barygaza, a good seaport for communication with the west. Ujjain, standing on the Barygaza-Kauśāmbī road, served the purpose of the Greeks who wanted to get hold on all depoes of trade. During the second stage of trade-voyage from India, as mentioned by Pliny, i.e., beginning about C. 100-80 B.C.[202] pepper of Malabar in S. India was carried by a hard and long land-journey by the main road from the south upto Ujjain and then by the side-track to Demetrius-Patala whence it was exported by sea to the west.

Epigraphic evidences show the economic prosperity of Ujjain, as the large number of inscriptions[203] record the various gifts from Ujjain. The Nāsik inscription of Ushavadāta[204] "gifts of Ushavadāta, the Śaka, son-in-law of Kshatrapa Nahapāna to gods and brāhmaṇas at Ujeni. The geographical references in the inscriptions of Uṣavadāta show that the latter's rule extended as far north as Ajmer and included Kathiawar, S. Gujrat, west Malwa, N, Konkan from Broach to Sopara and Nāsik and Poona districts. Hence we can easily infer the commercial advantages of his realm in as much as he had practically brought under his control the important ports of Gujrat and north Konkan regions through which Ujjain could have easily carried on her trade.

Besides, the Bhilsa Topes contain some inscriptions [205] which record gifts of so many bankers of their wives and which lead us to infer a good commercial life of Bhilsa (Vidiśā) near Ujjain. The gifts of merchants named Siriguta and

200 Tarn, G.B.I, p. 151.
201 Mahābhāshya, p. 146, n 1.
202 Tarn. G.B.I. pp. 369-71.
203 Lüd. Nos. :—172. 173. 210, 212, 216, 229, 231, 237-8' 302. 307, 359, 405-415, 560 & 1135.
204 Lüd. No. 1135.
205 Luders, Nos. 206-7, 248, 255 & 283.

Saghadeva are also recorded in Bhilsa Topes.[206] Weaving and ivory working formed the principal industries of the place, as evidenced by the inscriptions[207] recording the gifts of a weaver (Sotika) Damaka and recording the carving in ivory at Vidiśā. The Periplus [208] also mentions export of cloth from Ujjaini to Barygaza and thus confirms the statement of the inscriptions regarding the art of weaving.

The Periplus[209] is eloquent about Ujjain and her commercial importance and records - " Eastward from Barygaza is a city called Ozene, formerly a royal capital. From this place is brought down all things needed for the welfare of the country around Barygaza and many things for our trade, agate and carnelian, Indian muslins and mallow cloth and much ordinary cloth. She imports from upper country through Poclais for transport to the coast, spikenard, costus and bdellium." From this we see that though Ujjain had lost something of its former glory as a Royal residence, it was still a flourishing city with much economic importance in the 1st cent. A.D..

Ptolemy[210] mentions "Ozene as the capital of Tiastanes." The wellknown Ujjain symbol on some of the coins of Chastana shows his possible connection with the city. Rudradāman held his court at Ujjain and placed the provinces of Ānarta and Surāṣtra under his Palhava (Parthian) Amātya (Suviśākha). He probably wrested the Sindhu-Saubhīra region (Multan and Jharavar) away from some successor of Kaniṣka[211]. Thus under Rudradāman who won mastery over the Lower and middle Indus valley and who had conquered a number of states including Surāṣtra from the Sātavāhanas, Ujjain was in a position to carry on her commerce with the

206 Luders. Nos. 269 & 320.
207 „ „ No. 331.
208 Peri., 48.
209 „ „
210 Ptol., VII. I. 63.
211 Prof. H. C. Raychaudhuri, Poli. Hist, A. I., p. 508.

west through Barbaricum and Barygaza and with S. India through the Ozene-Ter route.

Kālidāsa has been eloquent in describing this city. (P.M. 33). This city witnessed the rise of the art of dancing and music and dancing girls were employed by courtesans in its temple of Mahākāla. (P. M. 35). It is also mentioned in the Bṛhat-saṃhitā (X. 15; XI. 35 & 56; XII. 15 and LẊIX. 30). Bāṇa's description of the city of Ujjayinī as "the proudest gem on earth, the very home of the golden age" speaks of its economic importance. (Kādambarī, Ridding - P. 47). Even in the days of Yuanchwang "the population here is dense and establishments wealthy (Beal. II. p. 270) and "the produce and manners of the people are like those of the country of Surāṣṭra", that is, they were engaged in commerce by sea (p. 269).

Now let us turn our attention to the inland towns of the Deccan. Following the route from Ujjain southward through Māhiṣmatī we come across Paithan (Cf. Rapson, H.I., I. p. 478). And thence, on another Barygaza-Masulipatam route we meet with Tagara and Dhannakata.

PAITHANA: It was the most important town of the Mulaka or Alaka janapada, which comprised the region round Paithan or Pratiṣṭhāna as the Sutta-Nipāta[212] proves it. It is also mentioned as the first place to be passed by Bāvarī's disciples on their way to Sāvatthi,[213] and this refers to a trade-route from Paithan to Sāvatthi.

According to the Imperial Gazeteer[214] Paithan is one of the oldest towns in the Deccan. The Pitalkhora pillar inscription[215] of C. the 2nd cent. B. C. records the gift of a pillar by the family of the perfumer (gadhika) Mitradeva from Pai-

212 Cf. S. N., 1001; Aḷakassa (Mulakassa) Paiṭhānaṃ purinaṃ Māhissatiṃ tada.
213 S. N., 1011-13.
214 Imp. Gaz., XIX. 317.
215 Lüd, No. 1187.

thana;[216] while another[217] records the gift made by the sons of Sanghaka of the same place. The Kānheri Buddhist cave inscription[218] records the building and endowment of a chetia-ghara and 13 cells in some Vihāra at Patitthāna, as also the excavation of a temple and a hall in "Rājatalāka Paithāna-pada." Buhler translates 'Rājatalāka Paithānapada' as 'in the taluk of Paithan called Rājatalāka" and if it is right, Paithana must be the name of a district.

The fees at various sacrifices of the queen recorded in the inscription[219] testify eloquently to the wealth of the Sātavā-hanas. Tens of thousands of cows, thousands of horses, num-bers of elephants, whole villages and huge sums of money (Kārshāpaṇas) formed the fees and hence this inscription may indirectly suggest the economic strength and resources of the region round Paithan.

The Periplus (51) states, "Among the market towns of Dachinabades there are two of special importance; Paithana distant about 20 days' journey south from Barygaza; beyond which, 10 days' journey east, there is another very great city Tagara. There are brought down to Barygaza from the places, by waggon and through great tracts, without roads, from Paithana carnelian in great quantity and from Tagara much cotton cloth and other merchandise brought there local-ly from the regions along the sea-coast." Thus according to the Periplus, it was an important centre of textile industry and the vast trade of the rich marts of Paithan and Tagara, instead of finding its natural outlet at Kalyan, was diverted by the Saka rulers across a difficult route to Barygaza, where pilot-service was always rendered to the incoming vessels. Fleet[220] draws our attention to an early trade-route from the coast, starting either from Masulipatam or at Vinukonda, pas-sing through Paithan and Ter to Chandore in Nasik and then

216 Lüd. No. 1187; A.S.W.I., IV. p. 83.
217 ,, ,, 1188.
218 ,, ,, 988; A.S.W.I., V. p. 76.
219 ,, ,, 1112.
220 J.R.A..S., 1901. p. 548.

crossing the western Ghats to reach Barygaza on the west coast.

Rapson[221] too, draws our attention to the position of Paithan and its route-connections. It was connected through Māhiṣmatī with Ujjain and Vediśā "which again lay along the central route from the coast to Pāṭaliputra."

According to the classical authors,[222] the capital of the Sātavāhanas in the 1st cent. A. D. was at Pratiṣṭhāna,' the modern Paithan on the north bank of the Godāvarī.' Ptolemy[223] mentions it as "the royal seat of Siri Ptolemaios" we come across Puloma, son of Gautamiputra and Sātakarṇi in the Purāṇic texts edited by Pargiter and this Puloma may be identified with Siri Ptolemaios of Ptolemy or with Siri Pulomavi of inscriptions and coins.

Inscriptions and coins prove that Pulumayi ruled over the Krishṇā-Godāvarī region and Mahārāṣṭra. Hence we may expect that Paithan carried on smoothly through the ports of both the east and west coasts of India overseas trade with the countries on the east and west. The figure of a ship found on the coins of Yajna Sri Sātakarṇi testifies to the fact that the king's power extended over the sea and ships carried on sea-trade with the distant countries.[224]

TAGARA: The earliest mention of this town may be traced to the term "Tagara-Sikhin," often mentioned in the Buddhist literature.[225]

Tagara is one of the inland commercial entrepots from which streams of trade flowed to Barygaza in the 1st cent. A. D. when the Periplus[226] records: "There are brought down to Barygaza ..... from Tagara much common sloth, all kinds of muslins and the mallow cloth, and other mer-

221 C.H.I., I. p. 478.
222 Jinaprabhusūri. Tirthakalpa. J.B.B.R.A.S.. X. 123, Āvaśyakasūtra. J.B.O.R.S. 1930, 290. Cf. Bhandarkar, EHD. sec. VIII.
223 Ptol., VII. 1. 82.
224 Rapson, Coins Andhra dynastry, p. 22,
225 M. 3. 69; S. 1. 92; Ud. 5. 3; Jāt, 3. 299 Cf. Budd. Ind.. p. 31.
226 Peri, 51.

chandise brought there locally from the regions along the sea-coast." "Cotton industry seems to have been the most thriving industry of the Deccan during our period. Tagara and Pratiṣṭhāna were great centres of this industry."[227] The author of the Periplus (51) adds, "there is another very great city, Tagara, about 10 days' journey east of Paithan." Thus we know definitely from the Periplus of Tagara, its relative position to other towns of the Dachinabades and its character as a feeder mart to Barygaza, the port for overseas trade.

Bhagwanlal Indraji identified Tagara with modern Junnar,[228] but Junnar is to the west of Paithan. Rather Yule's identification with Kulburg, S. E. of Paithan about 150 miles off, answers to the statement of the Periplus. Dr. Bhandarkar suggests that the modern Dārur may represent Tagara, prākritised as Tarur of Terur.

Fleet has identified it with modern Ter or Thair,[229] which is about 95 miles S. E. of Paithan and agrees substancially with the distance and direction of the Periplus. The actual distance from Broach to Paithan by road is about 240 miles and from Paithan to Ter 104 miles, being 20 and 9 days' journey[230] Fleet traces the early trade-routes of this area. The two routes, one starting from Masulipatam and the other from Vinukondu joined together 25 miles S. E. of Hyderabad, and ran through Ter, Paithan and Doulatabad to Markonda and then passing through the Nanaghat pass of the W. Ghats, reached Broach or Kalyan, the sea-ports. According to the Periplus most of the sea-port-towns, specially Barygaza were commercially connected with inland market-towns like Paithan and Tagara by "great tracts without roads." The Periplus thereby indicates the difficult nature of the country specially in the mountainous regions. Nasik official records speak of roads. We know also of Uṣavadāta's con-

227 Indian History Congress. 1951, Altekar, p. 28.
228 Ind. Ant., Vol. XIII. p. 366.
229 J.R.A.S., 1901. pp. 537. ff.
230 Schoff, p. 196.

stant and wide pilgrimages in the N. W. parts of the Deccan and hence we may infer that the less mountainous country was possibly covered with roads, which might have been frequented by traders of the locality. Now the question is why Tagara or Paithana should have sent her goods to a distant port like Broach, in preference to the nearer ports like Kalyan and Sopara. It might have been so as the author of the Periplus explains it, because the Śakas had closed the Sātavāhana port of Kalyan or Sopara. The Periplus speaks clearly of the textile industry of Tagara producing different kinds of cloth and all kinds of muslin. "The regions along the sea-coast from which other merchandise were brought" at Tagara locally[231] might have been the maritime districts of the east coast centering round Dhannakataka and not on the Konkon coast from which there was easier transit by sea to the ports like Kalyan and Sopara etc., whereas Fleet refers to the line of communication between east and west coast through Ter, which has been more probably referred to in the Periplus. The Graeco-Roman traders of the 1st. century got supply at the western ports of the goods of the countries on the east coast and hence this inland trade-route was busily frequented in the 1st cent. A. D., as hinted in the Periplus.

Tagara is mentioned in Ptolemy [232] as an ordinary place and not as a mart.

Tagara has been however, identified by Md. Abdul Aziz[233] with Nagram which stands on the north bank of the Godāvarī at its confluence with the Prānhitā, now a village in the district of Chanda (C. P.). Nagaram, about 250 miles right to the east of Paithan is more favourably situated at the junction of two rivers and is much nearer the east coast than Paithan and hence is more easily approachable from the east coast by the Godāvarī navigable throughout the year. Its distance from Paithan is more likely to favour the growth

231 Peri., 51.
232 Ptol., VII. 1. 82.
233 J.A.S.B. 1919, Vol. XV.

and development of both the towns as marts. It is only for this wide gulf of distance from Paithan to Nagram that the question of local tradition of transfer of capital from Tagara to Paithan by Rājā Sālivāhana in the 1st cent. A. D. is reasonable, because it would have helped the king to stem the tide of invasion from the north. The Periplus mentions the distance between the two as of 10 days, which of course we should judge considering the time and circumstances of the journey in the Deccan in those days when, the Periplus mentions the "tracts without roads."

DHANNAKATA: Hultzsch[234] identified the city with Amarāvatī, whereas Burgess suggested its location, about 18 miles west of Bezwada, on the right bank of the Krishṇā. "The earliest capital of the Andhrāpatha" was Dhaṅñakada, at or near Amarāvatī or Bezwarda,"[235] so far as it appears from the inscriptions. The Bhattiprolu Buddhist casket inscription[236] of C. 200 B. C. mentions its earliest king Khubiraka. Rapson[237] notes that "the earliest capital of the Andhras was Cri-kākulam; somewhat later we find them with a capital at Dhānyakataka (Dharanikóta or Amarāvatī) on the Krishṇā in the Guntur district."

The city of Amarāvatī is referred to in the Dhammapadatthakahā[238] as the birth place of the Buddha in one of his previous births and hence its antiquity is easily proved. One Brahmin is mentioned in the Jātaka[239] to have finished his education at Taxila and come to the Andhra country to profit by practical experience. This shows that the people of the Andhradeśa were in touch with those of Taxila in that period.

Now let us analyse the inscriptions of Amarāvatī to show the economic condition of the country. We hear of a per-

234 Ep. Ind., VI. 85.
235 P.H.A.I., Raychoudhuri, p. 312n.
236 Lüd., No. 1335.
237 Rapson, C.H.I, Vol. I, p. 542.
238 Vol. I, p. 83.
239 Jāt., I, pp. 356 ff.

fumer (gadhika) making a gift of a Chaitya pillar in the Amarāvatī inscription.[240] The inscription No. 1213 speaks of a merchant (vāniya) Bódhiśamma who lives at Kevurura. The merchant Budhi, son of the merchant Kaṇha is also referred to in the inscription No. 1214. Dhaṁnakaṭa is also mentioned in the inscription No. 1225 having a great chaitya where slabs, copying stone and many other objects were offered by some person who must have been economically sound. The merchant Kuṭa is said to have given a Chaitya pillar.[241] The Amarāvatī inscription[242] records the gift of a chief pavilion by the perfumer and the merchant Siṛidata, son of the merchant Dhaṁmila. The merchant Nāgatisa together with his son, the treasurer (hēraṇika) Budhi is also mentioned in the inscription No. 1239. The treasurer Sidhatha is recorded to have given a rail bar in the inscription No. 1247. The bankers (seṭhin) are also said to have headed the righteous hamlet (bhadanigama) who made a gift of a rail bar.[243] Dhañña kata is mentioned as the home of another donor Budharakhita, son of Gomdi.[244] A leather-worker (chammakāra) Vidhika, the son of a teacher (upajhaya) Nāga is recorded to have made gift of a slab with a filled vase in the Amarāvatī Buddhist sculpture inscription.[245] It is interesting to note that the son of a teacher is said to have adopted the industry of leather-working at Dhannakata, most probably owing to the influence of Buddhism which eliminated the caste-distinctions to a large extent. The wife of the merchant Samuda and another merchant's wife Sidhi are recorded to have erected copying-stones in the inscriptions No. 1281 and 1285 respectively. The inscriptions No. 1292, 1297 and 1298 mention the merchant's wife (Vāniyini) Nākachampakā, a treasurer and an artisian (ā-vēsani) Nadabhuti respectively.

240 Lüd.. No. 1210.
241 Lüd., No. 1229.
242 ,, ,, 1230.
243 ,, ,, 1261.
244 ,, ,, 1271.
245 ,, ,, 1273.

Thus, to sum up the considerable number of inscriptions which mention merchants, bankers, treasurers, perfumers and leather-workers, we may safely conclude Dhaṇnakata won commercial and industrial importance towards the beginning of the Christian era.

The wide away of the Greco-Roman influence in the art of Amarāvatī, which is now generally admitted leads us to presume the extent of Roman trade in this area. "Sea-borne trade between Rome and Southern India during the 2nd cent. A. D. is reflected in a figure, apparently a crude representation of Dionysus on one of the five stone-pillars unearthed in the central part of the valley of Nāgārjunikonda".[246] The construction of the Amarāvatī stūpa with its enlargements, decorations and railings is placed between C. 2nd cent. B. C. and 2nd cent. A. D., [247] that is, when the Andhras or the Sātavāhanas were in full power.

Dhanakataka was the capital and market-town of the Andhradeśa, a wonderful land of rivers, the Godāvarī and the Krishṇā with their tributaries. It was hence connected by a network of land-routes and water-routes, rivers being navigable from the sea-ports like Kantakasela at their mouths. Maritime traffic is attested to by the find of a large number of Roman coins on the Coromandel. In the migration of Hindu Colonists to the Far East in the 1st cent. A. D. the Andhra country had a large share. Ptolemy's apheterion to the north of Allosygne was the starting point of ships for the Far East.[248] "The coins of the period show that lead and potin predominated over copper and the issues were large and varied. Sea-borne trade was largely responsible for the flourishing state of Buddhism in Andhradeśa for nearly six centuries (300 B. C. - 300 A. D.). Buddhists were largely re-

246 A.S.I.R., 1928-29, p. 104.
247 Burgess, A.S.S.I.. p. 122-23.
248 Cf. Memoirs of A.S.I., No. 71, 1938 (T. N. Ramchandra).

cruited from the commercial classes whose wealth was utilised to raise Amaravātī, Nāgārjunikunda and other stūpas."[249]

The study of the various Buddhist sites shows the existence of five early roads converging at Veng, these roads leading to Kaliṅga, Drāviḍa, Karnāṭa, Mahārāṣṭra and to Kośala. Dhanakata was easily approachable by these different roads from different corners. Fleet speaks of the roads connecting the east and west coasts of ancient India. An early trade-route[250] of which well-marked traces still remain, from the east coast through Golconda, Ter and Paithan to Broach, which had started from Masulipatam and also from Vinukonda, both of the same district of Guntur, has already been pointed out.

According to some scholars Dhānyakataka was probably the capital of the southern Ikṣākus and it survives still in the remains of Nagarjunikonda. The Nagarjunikonda and Jaggayyapetta inscriptions[251] show that this country ruled by the Sātavāhanas upto the 3rd cent. A. D. went into the hands of the Ikṣākus and that it became the centre of different arts and crafts, as the latter inscription mentions the gift of pillars by one artisan Sidhatha.

One of the mounds at Pedaganjam[252] in the Ongole Taluk of the Guntur district has recently yielded a Prākṛt inscription of the 3rd cent, A. D.. The mound is called "Faranguladinne," i.e., "of the foreigners." This inscription on a marble pillar belongs to the reign of Sri Mādhariputra Virapurishadatta (218-239 A. D. according to Late B. V. K. Rao). This inscription appears to be issued by a certain householder named Sighila who was a resident of Dhaññakata. He belonged to a family of traders and was a dancer. He visited the place with all his relations, of whom the particular names like Sagarinika and Samudanika indicate their intimacy with the

249 Ibid.
250 Cf. J.R.A.S., 1901, p. 548.
251 Lüd., Nos. 1202-4.
252 Cf. Buddhist antiquities at Pedaganjam, by Sri B.S.L. Hanumantha Rao, Ind. Hist. Cong., 1957. p. 74 f.

sea. Thus this inscription throws light on the fact that Dhañ-ñakata was the home of artisans and maritime traders in the 3rd cent. A. D..

The Mayidavolu[253] (Guntur) prākṛt grant shows that Dhañ-ñākaṭa passed later on into the hands of the Pallavas of Kāñchī who stationed one official at this place. The Pari-hāras[254] (immunites) to the village of Viripāra in the Mayida-volu grant lets us know that salt-digging was an important in-dustry of the locality, monopolised by the state and that carts drawn by oxen were used as a means of conveyance even by the people of the higher section of the community. The manufacture of sugar was also a royal monopoly of their re-gion as evidenced by the Hirahadagalli grant.[255]

Next we shall proceed southward by the eastern coast and arrive at Kāñchīpura, another inland town.

KANCHI: The earliest reference to Kāñchīpura (Conjeever-man in the Chingleput district of the Madras presidency) in the Mahābhāṣya[256] shows its rise as early as the 2nd cent. B. C..

From the 'Tsien-han chou,' the record of Pan Kou (1st cent A. D.) we learn that Houng-che, which is equated with Kāñchī by Ferrand,[257] had trade relations with China through the coasts of Indo-China in the 2nd cent. B. C.. The Chinese came to Kāñchī by foreign ships to purchase pearls, glass, rare stone and strange products, giving gold and silks in exchange.

Though nnt mentioned in Ptolemy's geography the district of Kāñchī may be equated with his "Arouarnoi,"[258] most probably under the Nāgas.

253 Lüd., No. 1205.
254 Cf. Successors of the Sātavāhanas, by D. C. Sircar p. 186 and p. 193.
255 Ep. Ind., Vol. I, p. 2.
256 Mbhāshya, IV. 2. 104.
257 J.A., 11.13. p. 453 n 2.
258 Cf. S. S. Sircar, p. 148.

Kāñchī is also described in the Tamil poem, Manimekalai[259] as a place of Buddhism with a number of saṅghārāmas and a resort of the displaced people of Kaveripaddinam when the latter was ruined by the encroachment of the sea. Hence by the 3rd cent. A. D., the approximate date of this epic, Kāñchī might have flourished as a mart, specially because of its being the place of rehabilitation of the rich merchants of the renowned port Puhār.

Kāñchī rose to prominence as a mart when it became the capital of the Pallavas about the beginning of the 4th cent. A. D..[260] The inscription[261] shows the order of the king Śivaskandavarman from Kāñchī to his official at Dhaññakata. The two-masted-ship-coins, discovered extensively between Cuddalore and Madras which are attributed to the Pallava Kings by Elliot (list I. No. 38), suggest the trade relation of Kāñchīpura with overseas lands; and the interest of the Pallava rulers in maritime activities. We may assume that Kāñchī might have been commercially connected by road with Dhaññakata. The richness of its soil yielding fruits, flowers and precious stones is testified to by Yuan Chwang,[262] whose report of the existence of the Malaya mountains with sandal-wood trees nearby and of a town on the border of the southern sea, probably Nāgapattanaṃ or the Pallava port Mahābalipuraṃ sending ships to Ceylon, shows the economic importance of the area. This is corroborated by Tirumangai Ālvar who records in one of his Kadanmallai hymns (6), Peria Trumoli that from the busy port of Mahābalipuraṃ start "vessels bent to the point of breaking, laden as they are with wealth, big trunked elephants and nine gems in heaps".

The Pallava power of peace and plenty expressed itself best in its intense literary activity, as evidenced by Daṇḍī, a well-known Sanskrit rhetorician and perhaps the tutor of the

259 ed. Aiyangar, canto. 28.
260 Lüd., No. 1200.
261 „ „ 1205.
262 Watters, II. p. 227.

Pallava prince who refers to the city of Kāñchī; (Kāvyādarśa. ch. III. 114) and its prosperity in the 7th cen. A. D..

The Mattavilāsa, the work of Mahendra Varman I (600-630 A. D.) mentions how the Vihāra at Kāñchī was endowed with large funds by one rich merchant named Dhanadāsa and shows Kāñchī's commercial importance. The Tamil inscription (Ep. Col. 12 of 1895; Venkayya M.C.C. Mag. VIII. p. 102) of the temple at Kāñchī also refers to the trade activities of the land at the subsequent period. It registers a license to the villagers of Kudiraicceri to carry on trade in all goods from camphor to shoes.

Continuing the route further from Kāñchī towards the south we come across Madura.

MADURA:—It is generally referred to as "Dakṣiṇa-Madhurā" as distinguished and probably adopted from Uttara-Madhurā, the holy city on the Yamuna. Aśoka mentions the Cholas and the Pāṇḍyas among the "antas" or the kings of the border countries and the use of the term in the plural leads us to infer that in Aśoka's time there were more than one Chola and one Pāṇḍya king. Madura was one of the two capitals of the Pāṇḍya kingdom, the other being at Korkai.

The Periplus mentions the Pandion kingdom which, during its time extended beyond the Ghats and included Travancore. Madura controlled pearl-fisheries of the gulf of Manar, which belonged to the Pandion kingdom.

It was an important market-town as reported in the Tamil epics. The Maṇimēkalai speaks of the southern-Mathurā. The Śilappadikāram (C. 3rd cent. A. D.) mentions "the royal street, the market-street, the courtezan's street and the streets where dwelt the goldsmith, corndealers, cloth-merchants and jewellers etc."[263] In the great market of Madura are exposed for sale "carts, chariots and ornament chariot tops.[264] "Cloths of cotton, wool or silk are exposed to view, sacks of

263 Silappadhikāram. XIV, 143-218.
264 „ „ 168-211.

pepper and sixteen kinds of grains - paddy, millet, gram, peas, sesamum seeds etc. are heaped in the grain-merchants' streets and the brokers move to and fro, weighing and measuring the pepper and gains purchased by the people."[265] It refers to its markets and trade in pearls and diamonds as follows: "Kóvalan next passed through the wealthy street, full of groups of dealers in superior diamonds, which were free from such defects as crows' feet, spots, holes and lines...[266]" The same epic states that Madura was flourishing as the capital of Āriyappaḍoilānda Neḍuñjeliyan. It was the busy centre of trade and attracted even people like Kóvalan and Kaṇṇaki.

According to the traditional account of the three Sangams the old capital of the Pandion kingdom was swallowed up by the sea and as a result it was shifted to Korkai, from which again it was shifted to Madura probably by Pliny's time, as he had referred to it.

The city with all its temples, palaces and mansions and even high walls has been described in the Neḍunalvāḍai.[267] The city itself is referred to as 'Māḍakkūḍal,' i.e., the city with storied mansions. "The gateway of Madurai was high and broad enough to allow three elephants to enter abreast. It had massive wooden doors, and supported a storeyed watch-tower on the top. While the massive wooden frame of the Madurai gate was glistening black with a coat of mustard oil,[268] its double doors were armoured with sheet iron painted red, perhaps to prevent rust."[269].

Sheep-rearing was also an important means of livelihood, as the Śilappadikāram[270] refers to shepherds in Madurai supplying ghee to the palace everyday by turns.

Madura attracted foreign merchants for carrying overseas trade. The literature of the Sangam records that Madura had

265 Ibid,
266 Śila, Bk. XIV, 180-200.
267 Neḍunalvāḍai, 11. 76-120.
268 „ " II. 79-90.
269 „ „ II. 80-81. Cf. Comp. His. Ind. II. - p. 731.
270 Śilapp, xvii, 17.

guards of 'dumb mlecchas'[271] and Yavanas in complete armour keeping watch in the king's palaces. The Romans were attracted to India for her articles of luxury and Madura, an emporium of gems and pearls became a colony of Roman traders. The Pandion king sent ambassy to Augustus and hence Roman trade with the Pāṇḍya kingdom got an additional stimulus. Much of the inland trade was carried on by barter in the early centuries of the Christian era, paddy forming the common measure of value but metallic currency was used in foreign transactions. Prof. N. K. Śāstrī[272]. says that in Madura alone copper coins were used in daily transactions of foreign colonists.

Madura is mentioned by Ptolemy[273] as the "royal city of Pandion." Kauṭilya [274] also refers to the fine cloth of Madurai. Korkai was its main outlet for foreign trade.

271 Kanakasabhai, Ch. ii and iii.
272 Sewel, J.R.A.S., 1904. pp. 609-15. Cf. Cholas-Prof. N, K, Śāstrī. p. 109.
273 Ptol.. VIII. 1. 89.
274 Kau., II. 11. 81.

CHAPTER V.

Export

We have discussed the trade-routes connecting India with the outside world and also inland routes connecting different ports and towns of the country through which trade flourished in the period of our enquiry. We have seen how the foreign rulers, the Greeks, the Śakas, the Parthians and the Kushāṇas were interested in the trade of this land. The period of peace under the Kushāṇas in N. India and under the Sātavāhanas in the south witnessed the development of trade. Moreover, the peace at Rome under the Imperial power led to her colonial and commercial expansion in the east, specially in India in the beginning of the Christian era. The discovery of the Hippalus in the middle of the 1st cent. A. D. stimulated the traders to carry on trade between India and the west. Now we shall enquire into the commodities of commerce, exported from India to the outside world during the period of our investigation.

Let us begin our enquiry with reference to slave-trade in India. The Ṛgveda[1] refers to slavery for gambling dues; and it[2] speaks of gift of 50 young women, perhaps female slaves. The Pāli texts refer to three classes of slaves, one born in the master's house, one purchased for money, and one who should die by the hand of the foe. The Jātaka[3] uses the expression "meek as a 100-price slave girl." implying thereby its price. Slave-girls clad in cotton-clothes are also mentioned in the Mahābhārata[4] to have been presented to Yudhiṣṭhira at the imperial sacrifice by the men of Bharukachchha. The Jaina texts refers to six types of slaves. Slaves are also elaborately

1 Ṛgveda, X. 344.
2 „ VII. 19. 30.
3 Jāt, I. p. 299.
4 Mbh. (ed Calcutta) II. 51. 10. "Śataṃ dāsīsahasrānām kārpasikanivāsināṃ .. Bharukacchanivāsinaḥ."

deạlt with in Manu, Nārada and Kauṭilya. The Milindapañha[5] also mentions the usual practice of pledging or selling a son by father in debt or without livelihood. It mentions slaves and slave-girls in IV. 2. 10 and in V. 4. Hence we may easily infer the possibility of slave-trade in India in the days of yore. We cannot agree with Megasthenes who remarked that the Indians did not engage any slaves, foreign or indigenous. Besides, the laws of the Arthaśāstra emphasising upon the principle of status of slaves by nationality and those of the Dharmaśāstras laying stress on the principle of status by birth, show clearly the regularised system of slave-trade in India. Hence we may expect a considerable quantity of slaves being exported outside.[6].

Schoff[7] comments that "the Arabs were inveterate slave-traders then as now and the ports of Omana were always slave-markets." Ptolemy Philadelphos secured slaves from India through the Sabeans and displayed them in exhibition. The Periplus[8] records that a few female slaves were sent from India to Socotra and thence to Rome through the Arabs or the Greeks of that island. Human eunuchs have been mentioned in the Digest-lists of oriental products, subject to duty at Alexandria.[9] But the Periplus also draws our attention to the fact that "from each of these market-towns (Ommana and Cana) there are exported to Barygaza ..... slaves." (see. 36). This leads us to presume that commerce in slaves between India and the west was rather from west to east than the reverse.

Or H.D.S.—II. 49; 6-7.

5 Milinda, p. 279.

6 Cf. Studies in Ind. Hist. & Cul, by. Prof. U. N. Ghosal, Ch. XIV.

7 Schoff, p. 161.

8 Peri, 31.

9 Digest of the Roman Iaw, xxxix. xv. 5.7.

It may be noted that Rostowzev speaks of the increase in demand of the Romans specially for oriental slaves, possessing some knowledge of agriculture, cattle-rearing and industries.

Animals or animal-products:—

India is represented on a silver plate of Lapsacos as a woman surrounded by a parrot, a guinea-fowl, a tiger, a leopard, and hanumān monkeys. All these except the guinea-fowl were Indian.[10] The Periplus[11] mentions the animal-life of Dachinabades (Deccan) - " all kinds of wild beasts, leopards, tigers, elephants, serpents, hyenas, and baboons of many sorts," but nowhere its author speaks of exportation of any animal by sea from India. Transport of animals by sea was very difficult, if not dangerous. Hence we may easily infer that animals crept into Rome, not by sea but by land-routes, even after the discovery of the Hippalus.

The lions were sent to Rome for exhibition and the exhibition of Sulla and Pompey included Indian ones. Aelian speaks of Indian lions with black manes. Pliny[12] speaks of lions with or without manes and says that the maneless lions were of Indian origin.

A tiger was first exhibited at Rome in a cage or den by Augustus and four tigers were displayed by Claudius. This exhibition created good impression on public minds, and resulted in the occurence of figures of tigers in mosaics. Four tigers devouring their prey were represented on a mosaic near the arch of Gallienus. Pomponius Mela gives a detailed reference to Hyrcanian tigers.

Ptolemy[13] also mentions tigers of Ceylon and of "a mountainous country adjoining the country of robbers wherein are found elephants and tigers."[14] Tigers of Augustus or Claudius were gifts by Indian ambassadors.

Parrots were so much liked by the Romans for the grace and beauty of their plumage that they were exported from India to Rome. Pausanius[15] speaks of Indian parrots. Par-

10 Cf. Arrian, Indica. 15, 9; Strabo, XV. 1. 37.
11 Peri., 50.
12 Pliny, VIII. 53; Ael, XVII. 26.
13 Ptol., VII. 4. 1.
14 „ VII. 2. 21.
15 Paus., II. 28.

rots are mentioned neither in the Digest-list nor in the Periplus. Hence we may safely conclude that Diodors attributes the parrots to Syria and parrots are found in works of art in the Greek and Roman graves in South Russia,[16] and suggests that the parrots might have gone to the west by the land-route upto Antioch or via Oxus and the Caspian.

Notwithstanding the spirit of non-violence and the objection to taking life held by the Buddhists so strictly and by the Hindus to a less extent, trade in leather and leather-manufactures was carried on unopposed in ancient India. Furs, skins and leather had been used in ancient India. The Rathakāra or the cobbler made many things.[17] Trade in hides and furs was of much value. The Periplus records that "Seric skins" were exported through Barbaricum (Sec. 39) and that "sailors set out thither with the Indian Etesian winds about July," and that "through these winds the voyage was more direct and sooner completed." (39). Thus it was a direct communication along the sea-route. Pliny[18] says, "of all the different kinds of iron, the palm of excellence is awarded to that which is made by the Seres, who send it to us with their tissues and skins; next to which, in quality, is the Parthian iron." He again says[19] that "the most valuable products furnished by the coverings of animals are the skins which the Seres dye." Schoff[20] comments that these passages are sufficient answer to those who have doubted the statement in the Periplus, and asserts that fur must have been sent overland across Asia in the 1st cent. A. D. to Rome. Now the term "Seric" or "Seres" might have equally meant Chera, the Ch and S being interchanged. If that be so, the skins or hides must have been Indian products, sent through the ports of the Chera kingdom in S. India, so frequently onwards. The "Seric skins" of the Periplus exported through Barbaricum, on the Indus

16 Hereen, As. Nat., II·, trans. 1846, 361.
17 J., VI. p. 142- G. 636; Cf. Fick, Op. Cit - pp. 86 n and 326.
18 Pliny XXXIV. 41.
19 „ XXXVII. 77.
20 Schoff, p. 171.

were partly Chinese furs brought with silk and partly Tibetan furs. The Chinese literature[21] shows that the skins and furs were important articles of trade of the Chinese. While speaking of the frontier of India, Stein[22] describes in detail the ancient records written on leather, which he discovered during the exploration of the Niya site, bearing the date of the 3rd cent. A. D.. Babylonian skins form an article of trade subject to duty, included in the Digest-list. They went not only by land-routes through the Parthians, but also direct from the Indus to the Red Sea and Egypt, as the Digest-list shows. In ancient India skins were regularly supplied from the districts of the north. The Mahābhārata[23] in the Sabhā-parva speaks of skins of martens and weasels besides wool, silk and muslins, as presents to Yudhiṣṭhira from the Śakas, Tukhāra and Kaṅka tribes.

The Periplus[24] mentions that "ships are sent from Ariaca and Barygaza, bringing to these far-side market-towns (i.e., Opone in E. Africa) the products of their own places; wheat, rice, clarified butter, sesame oil, cotton cloth, girdles and honey." The African coast produced little oil and hens needed it. "Clarified butter" was prepared from milk of humped cattle and buffaloes. Horn and tails were exported. The yaks of Tibet supplied Rome with these, as referred to by Cosmas and Aelian. The Romans used the tails of silky white hair as fly-flaps.

Wool was one of the valuable commercial products of ancient India. Manu assigns it as the material of the sacrificial thread of the Vaiśya and hence we may assume its importance in the life of traders. Watt[25] has rightly opined that wool came most probably to India through the Aryan invaders who were shepherds. Hence wool had assumed a prominent position in the art-crafts of India from very early

21 Hirth, p. 226.
22 Anc. khotan, 1907. p. 345.
23 Mbh, (H.D.S.) II. 49. 22-25.
24 Peri., Sec. 14.
25 Com. pro. Ind., p. 1123.

times. The best wool is available even today in the Punjab and frontier province and in the Himalayan tracts, in the western India and the Deccan. Blanket-making industry was developed in the border land of India even in the Achaemenid period. Yāska refers to "the Kāmbojas who are so called because they enjoy blankets or beautiful things". This account of Kāmboja reminds us of the condemnable practice of the northerners of the Ūrṇā-vikraya, mentioned by Bodhāyana in his Dharmasūtra. Shawls of Kashmir are mentioned as one of the presents to Yudhiṣṭhira in the Sabhāparva. Kashmir shawls were exported westwards by way of the Indus or Barygaza. The Periplus nowhere mentions wool as an export from India. The Arabs kept wool as a matter of secrecy in their own hands. The Graeco-Romans (Yavanas) obtained wool or woolen clothes in Indian markets like Kaveripaddinam (Pilai, 25). Hence C. V. Vaidya[26] has remarked, "Gold-latticed silken, cotton and woolen cloth used to be exported from India by the land and sea-routes in very early times. Trade in woolen articles is referred to in the Bṛhat-jātaka ("āvika", VIII. 14).

The hides, teeth and horns of rhinoceroses formed articles of trade between India, Africa and Rome. The Periplus (sec. (6) states that "from the district of Ariaca were exported ivory, tortoise-shell and rhinoceros-horn." Pliny[27] says that lycuim was sent by the Indians in the skins of rhinoceroses and camels. The Romans made oil-flasks called "Gutti" from the horns and vessels of horns of rhinoceroses (Watt, Dict. sv. Rhinoceros). It is interesting to note that there are three kinds of rhinoceroses in Assam, viz, in the swamps which fringe the Brahmaputra and in the hills, south of the Surma valley and also in the marshes of the Kāmrūp district.[28] Trade in hides (charma) is referred to in the Bṛhat-Jātaka (VIII. 12). The Harṣacharita also praises the varieties of leather called Kardaranga and samurūka (ch. VII. 243. p. 214).

26 Epic India, p. 236.
27 Pliny, VI. 173.
28 Imp. Gaz. Ind., Vol. VI, p. 20.

Ivory was one of the most important articles of trade between the east and the west. On the evidence of the Susa inscription of Darius we may say that Indian ivory was exported to Persia and made popular there to such an extent that the Achaemenid emperor utilised it for the making of his own palace. The Greek term, "elephas" for ivory may be taken to be derived from the Sanskrit word "ibha" meaning elephant and this may suggest the export of ivory to the Greeks in high antiquity. It was used for ornamentation by the Romans from the earliest times, as we learn of its use from literature. It was considered as one of the most important riches as good as gold, as referred to by Lucian. India supplied Rome with ivory, as the Periplus refers to its supplies from the district of Ariaca (sec. 6), from Ozene (49), from Dosarene (62) and from the Ganges (56). Thus the Periplus mentions Barygaza, Muziris and Nelcynda on the west coast and Dosarene on the east coast as places from which ivory was exported from India. Ivory of Daśārṇa had been famous. It is mentioned in the Mahābhārata as the most acceptable offering which the king of the Oḍras could take to Yudhiṣṭhira. It is interesting to note the ivory statuette, a pure product of Indian art, discovered at Pompeii by Prof. Maiuri, ascribed to C. 79 A. D.. Tarn mentions[29] "the enormous quantities of Indian ivory and spices exhibited by Antiochus IV in his triumph at Daphne in 166 A. D." "Indian ivory continued to reach the Aegean till Ptolemy II threw enough African ivory on the market to break the price and secure the trade for himself."[30] Pliny[31] also speaks of "an ample supply of tusks" to Rome "from India." He says that "Indian elephants are indeed of a larger size[32] and the tusks fetch a great price and supply a very elegant material for images of gods.[33]

29 G.B.I., p. 362.
30 Tarn, G.B.I, p. 366.
31 Pliny, Bk. VIII. 4.
32 „ „ 8.
33 „ „ 10.

A. Stein[34] speaks of "an ivory die of the peculiar elongated shape, still popular in India", discovered from the ruined sites of Khotan and hence we may infer that ivory die was exported from India to Khotan. "Ivories of undisputable Indian origin" are found out after excavation at Begram. These ivories are ascribed to the 2nd and 3rd centuries A. D. and show knowledge in sculpture on ivory in India of the Kushāṇa period.[35]

Works of ivory fetched such a high price from the foreign markets that elephants were taken special care of, even when they moved freely in the forests. (Kauṭilya. II. 11). Kālidāsa also refers to the existing law of the land that even the wild elephants who do positive harm should never be killed. (Raghu, V, 50 & IX. 74). He draws our attention to works of ivory in his Raghu, (V, 72 & XVII 21.) Four ivory seals, discovered at Bhita are believed to be the products of the Gupta period by Marshall (A.S.I,-A.R.,-1911-12, p. 48). We have also a number of dice (Kumrahar excavations, p. 136), one foot-sandal (Nālandā Museum. Arch. No. 32, 2953) and a lamp-stand (A.S.R., 1903-4., Pl.; XXXIX. p. 97) of ivory unearthed at Kumrahar, Nālandā and Basārh. The Bṛhat-saṃhitā states that "the value of elephants is determined by the amount of ivory they have". (XXVI. 8). It also commends the use of ivory in the making of coaches; ("Kāryolaṃkāravidhirgajadantena praśastena") in LXXIX. 19) and refers to ivory articles. (LXXXVII. 9). The Bṛhat-jātaka also refers to trade in ivory-articles. (VIII. 12). Cosmas refers to elephants of Orrotha (Surāṣtra ?), Kalliana, Sindhu, Sibor and Male (Mālābar) and their export to Ceylon. (pp. 363-73).

Next to ivory, other articles of luxury and decoration are tortoise-shell, pearls, silk and lac. The Periplus[36] records that

34 Khotan, p. 386.
35 Cf. Jour. Ind. Soc. Orient. Art, Vol. XVI., 1948.
36 Peri., 56.

tortoise-shell is exported from Bacare and Nelcynda, from Taprobane[37] and from Chryse.[38]

Pearl was the most important article of trade between India and the West. The Periplus mentions the region "from Comari to Colchi, where the pearl-fisheries are, they are worked by condemned criminals,and this region "belongs to the Pandian kingdom."[39] It adds that in the region called Argaru "and nowhere else, are brought the pearls gathered on the coast." It speaks of" pearls," brought through Ganges, the market-town on the river Ganges[40] and also of Taprobane (Ceylon) producing pearls (16). It records that "great quantities of fine pearls"[41] were exported from Nelcynda.

Pliny[42] also says that "the most productive of pearls is the island of Taprobane," and they are sent chiefly by the Indian ocean.

Pliny [43] says that pearls came into general use in Rome after the surrender of Alexandria; but small and cheap pearls first began to be used about the time of Sulla. Roman trade in pearls multiplied itself to a great extent after the discovery of the Hippalus and as a natural result of the enormous demand of Greek and Roman girls and ladies for this feminine adornment. Pliny[44] says - "Our ladies glory in having pearls suspended from their fingers, or two or three of them dangling from their ears .... it is not enough to wear pearls, but they must tread upon them and walk with them under foot as well." Pliny [45] saw "Lollia Paulina, wife of the Emperor Caius covered not at any public festival or any solemn ceremonial but only at an ordinary betrothal entertainment,

37 Peri., 61.
38 Peri., 63.
39 „ 55.
40 Peri., 63.
41 Peri., 56.
42 Pliny, IX. 54.
43 Pliny, IX. 59.
44 „ 56.
45 „ „ 58.

with emeralds and pearls, which shone in alternate layers upon her head, in her hair, in her wreaths, ears, neck, bracelets, and on fingers, amounting to forty millions of sesterces, the produce of no trade but of plunder or spoliation from provinces." Besides Philon and St. Paul, Pliny lamented the use of pearls and was almost incoherent with wrath in his condemnation of this unnecessary use of luxury which cost Rome so much and which heavily drained off the wealth of Rome in the shape of gold into India.

Ptolemy[46] records that "the country of the Kareoi in the Kolkhic gulf" is famous for "the pearl-fishery." The Śilappadikāram speaks of pearls sold at Argaru and Kaveripaddinam. Kauṭilya also mentions pearls of korkei. Kālidās also refers to pearls of the mouth of the Tāmraparṇī river (Raghu. 4.50—"Tāmraparṇīsametasya muktāsāraṃ mahodadheḥ"). Fa-hien notices precious stones and pearls in Ceylon. (Legge p. 101; Beal, Intro. ch. 37). He is corroborated by Varāhamihir (Bṛhat, 81.2) who refers to "eight sources of the best pearls from Oysters, viz. 1) Siṃhalaka (Ceylon, 2) Paraloka, 3) Surāṣtra 4) The Tāmraparṇī, 5) Persia, 6) the North country, 7) Pāṇḍyavātaka and 8) the Himalayas. He mentions the special features of each of them; of which those of Ceylon top the list because they are "multi-shaped, glossy, swan-white and large". ("Vahusaṃsthānāḥ snigdhā haṃsābhāḥ siṃhalakarāḥ sthūlāḥ"). The Bṛhat-jātaka refers to trade in pearls, jewels and other sea-products ("jalārjitasvaḥ" in ch. XVIII. 9). The Amarakosha (6. 104-6) mentions different types of pearl-necklaces.

Yuan chwang also speaks highly of pearls of Persia (Beal. II p. 278) and also of Ceylon (II. pp. 236, 253). Cosmas says that pearls formed an important item of export from Ceylon to the marts of India (XI. p. 363). Thus we see that India produced pearls enough to be exported during the period of our research.

46 Ptol., VII. 1. 10.

SILK:—Silk in the west was imported mainly from China by the overland trade-route, called better as the silk-route. It was largely used during the reign of Augustus but the fashion was condemned as effiminate so that early in the reign of Tiberius the Roman senate enacted a law "that men should not defile themselves by wearing garments of silk."[47] The cost was enormously high and from Aurelian we learn that silk was worth its weight in gold. Pliny and other moralists resented at the use of their luxury. Discoveries of silk in tombs in S. Russia indicate the use of the Oxus route while the same sort of silk discovered from Panopalis in Egypt indicate the use of the sea-route as well.

The antiquity of silk-industry in India is uncertain but the weight of evidence seems to be in favour of its importation from China by way of the Brahmaputra valley, i.e., Assam-Bengal route early in the Christian era. Silk is mentioned as foreign gift in the great epics of India and in Manu. Kauṭilya also mentions silk of China. Kālidāsa speaks of 'chīnāṁśuka' (Chinese silk) in Śakuntalā. (Act. I). He also refers to the weaving of cloth of cotton and silk of the superfine character, fine enough to be easily blown away by breath. ("niḥśvāsahāryāṃśuka" in Raghu, XVI. 43). Hence we may infer that India imported silk from China in the early centuries of the Christian era and manufactured silk-cloth in the Gupta period.

Though India had imported silk from China, yet the Periplus[48] shows that silk-yarn was exported from Barbaricum probably in exchange for frankincense, Indian muslins and mallow cloth were brought down from Ozene[49] to Barygaza,[50] whence silk-cloth was exported; silk-cloth was exported from Nelcynda[51] and also that "raw silk, silk-yarn and silk-cloth were brought on foot through Bactria from Thinae to Bary-

47 Tacitus, Annals. 11. 33.
48 Peri, 39
49 Peri, 48
50 Peri, 49
51 Peri, 56

gaza and were also exported to Damirica by way of the river Ganges."[52]

The Periplus shows no doubt silk exported from India, but it is not unlikely that Chinese silk which mainly fed the markets of the west passed also through India for reexportation to the western countries, specially Rome. Control over silk-trade led to war between Rome and Parthia, and hence at the time of the author of the Periplus the sea-route was the only one left open to the silk-merchants. Besides, silken fabrics, yarn and thread appear in the Digest-list and this fact confirms the use of this sea-route through the harbours of India, i.e., Barygaza, Nelcynda and kaveripaddinam etc.

It has already been shown how through the silk-route of the Tarim Basin "during the first few centuries of the Christian era traders..... make a very profitable business in Chinese silk with the Roman countries in the west," (P. C. Bagchi, India and C. Asia, p. 15) and how the chinese or indigenous silk was exported from India both by the sea and land routes (Periplus). Now the fate of silk-trade of India with the west in the subsequent centuries requires careful attention. With the fall of Roman empire this trade had a hard hit. The Roman empire was partitioned into east and west in 364 A.D. and Rome was prey to a series of mishaps in the next ceneury, i.e. at the hands of Alaric in 410, of Attila in 451 and of Genseric, the Vandal in 454; and as a natural result the Roman empire collapsed by C. 476 A. D.. Of course, the Byzantime empire with Constantinople as its head-quarter. had the oriental trade much developed. The ransom of 4000 robes of silk which Alaric secured from Rome speaks of the volume of its silk-trade with the east (Gibbon III ch. 31). The discovery of Byzantime coins of the subsequent three centuries in different parts of India justifies the same. (Sewell, "Roman coins in India - J.R.A.S. 1904, pp. 591-637). Procopius (C. 542 A. D.) reports how the Persians monopolised the silk trade, they purchased silk from India

52 Peri. 64

and sold it to the western markets, specially at Byzantium during the reign of Justinian at an exorbitant price. Justinian had at last to regulate the silk price by legislation that one pound of silk must not cost more than 8 pieces of gold; and that the law-breaker would have his property confiscated by the state. (Procopius - XXV, 12-22 (Vol. pp. 297-299).

Justinian tried his best to secure silk from India through the Ethiopian merchants (Procopius - I. XX. 9-12) but failed to abolish Persian monopoly. Matters were brought to crisis when war broke out between Byzantium and Persia in C. 540 A. D.

The Byzantime emperor was at last forced to contact with some itinerant monks who brought some eggs of silk worm from Serinda (China ?). The problem was permanently solved with the growth of silk at Byzantium. (Procopius - vol. V. pp. 227-231 & 437 ; Viii, Xvii I-14). The silk problem in the west, as explained above, told upon the traders in India. The Mandasor inscription (Fleet - pp. 81-84, No. 18. Pl. XI) states that a guild of silk-weavers migrated from the district of Lāta (Gujrat) to the city of Daśapura (in western Malwa) where they gave up their own crafts and took to different pursuits and where they built a sun-temple in 437-8 A. D. The fact of the epigraph may be explained by the contemporary history. The silk-weavers had so long been engaged in silk-trade with the west, while living at Lāta and using most probably the port of Barygaza for transport. Now with the decline of that trade, they had to move inland and take up new vocations. The sun-temple was built by them, even when displaced, by the wealth they had acquired by craft (Śilpāvāptairdhanasamudayaiḥ). This fact together with the piece of advertisement as reflected in the inscription "tāruṇya .... paṭṭamayavastrayugāni dhatte" (Fleet C. II. - III. p. 85) shows clearly how silk-trade had flourished in the Gupta Period in our country. The Amarakosha also refers to silk-weaving in our country (3. 180 ; 6.113). Trade in silk and cotton clothes is repeatedly mentioned in the Bṛhatjātaka. ("vastrānāṃ kri-

yādikuśalaṃ" in ch. Xiv, 2; .... "vastrasugandhapaṇyajīvī" in Xviii. 1 and "sudhautāgradukūlagupta" in XXvii. 18.).

Both Yuan Chwang (Beal. ii. 319) and Cosmas (II. p. 47) refer to China as the home of silk and we may expect that silk of China was so popular in India in their period. Bāṇa lets us know that silk and textiles with designs (chitrapaṭa) came from the king of Assam as present to Rājyaśrī during her marriage. He also describes the palace, "arrayed in textures, ... of linen, cotton, bark-silk, spider's thread, muslin and shot silk, resembling sloughs of snakes," (ch. iv. 159-H.C. (C. & T) -p. 125).

The royal costumes as illustrated on the Gupta coins and the ordinary ones, as depicted in the Ajantā caves, bear clear testimony to the highly developed state of textile industry in India in the Gupta Period.

LAC:--The lac insect is native in India and is still confined to India. Watt[53] says that it gives us two things, a dye and a resin. Preparation of lacjuice was an important industry of ancient India, as reflected in the Jātakas.[54] It was used by ladies in adorning their hands and feet.[55]

The Bṛhatsaṃhitā also mentions its use for the making of a compound perfume (LXXVII. 9) and of an adamantine glue. (vajralepa - LVII. 5).

The Periplus[56] mentions that coloured lac is exported from the district of Ariaca across the sea to Adulis on the E. African coast, where Greek merchants must have found it often. Pliny[57] also refers several times to lac of India. Aelian[58] (250 A. D.) describes lac of India made from insects and used as a red dye. "That substance was made known to Europe through the Arab traders, hence it was often called 'Arabian' or 'Ethiopean' resin. If it was known to the ancient

53 Commercial products of India, pp. 1053 ff.
54 Jāt, I. pp. 179, 319; III. pp. 41, 183; IV. p. 256.
55 " III. p. 183; IV p. 256; Amarakoṣa, 5, 10; Megha, II. 11.
56 Peri, 6.
57 Fliny, XXXVII. 36-7, 39-40.
58 Nat. Hist, Anim, iv. 46.

Greeks, their knowledge of it could not have much preceded the date of their discovery of India itself." (p. 1054).

Plant-products

PEPPER:—It formed one of the most important plant-products as an article of trade between India and the west during the period of our review. It is frequently mentioned in the medical treatises of Charaka and Suśruta[59] as drugs for moving the bowels and for helping digestion and for invigorating the eye-sight. Watt[60] says that 'it is a perennial shrub, native of the hotter parts of India from Nepal eastward to Assam, the Khasia hills and Bengal, westward to Bombay and southward to Travancore and Ceylon." Laufer[61] says that "pepper must have been introduced into Persia from India, which is the home of the shrub."

Kālidāsa speaks of the valley of the Malay mountain as being rich in pepper (Raghu, 4.46).

Some scholars think that Indian pepper in small quantities might have crept in packets into Greece where it was used as a medical drug as early as the 5th cent. B. C.. But Tarn[62] believes that " the export of pepper from India on any scale certainly began in the period of Greek rule." Pepper was not definitely exported to Egypt on any scale in the 3rd or 2nd sent. B. C., in as much as we find no mention of it in the Papyri. The plenty of pepper in the house of an Athenian tyrant, Aristion[63] (88 B. C.) decides the question of the beginning of export of pepper from India not later than C. 100 B.C.

Indian pepper went to Seleucia and overland to Syria where it was known to the Romans when they had annexed it in 64 B.C.[64] Egypt knew of Indian pepper through the sea-trade of the Ptolemies. The Chinese seem to have been aware of

59 Ch. 38, verses. 58-60, 44 & 46.
60 Com. prod. of Ind. p. 891.
61 Sino-Iranica. p. 374.
62 G.B.I.. pp. 370-1.
63 Plutarch, Sulla, 13.
64 G.B.I., 371.

the Indian origin of the plant, as they had adopted the term "pit-pat (pal)," corresponding to Sk. pippalī. Pepper was earlier in demand in China and that is why the junks sailed in the Malabar coast in the 2nd cent. B. C.. Hence we may safely infer that Indian pepper began to be exported to the outside world, specially to the west in the 1st cent. B.C..

Now let us see the particular routes in different stages of the export of pepper. Pepper was the most important product of south India, one district[65] of which in Malabar had almost a monopoly. In the first two stages (upto C. 50 B.C.) it had to make a tedious land-journey from south to Demetrius, as Pliny shows that all ships going westward had to call at Demetrius which was the first centre of export.[66] The third stage, beginning about 50 B.C., of voyage of Pliny cut out Demetrius and went straight from Sigerus, south of Barygaza to the coast of Arab or the Persian gulf. This threatened the pepper-merchants of Demetrius like Indrāgnidatta, who had to move further south to the country behind Barygaza. The importance of pepper-trade soon brought about Pliny's fourth stage (beginning about 40-50 A.D.) when ships of the western countries went direct to Malabar. The discovery of the S. W. monsoon increased this pepper-trade to the maximum degree.

The Periplus[67] speaks of Muziris and Nelcynda, where "they (Graeco-Romans) send large ships on account of the great quantity and bulk of pepper and malabathrum." It records that "there is exported pepper which is produced in quantity in only one region near these markets, a district called Cottonara." The port of Tyndis lay at the mouth of the river Ponnāni and received supplies down the river, which, according to the Imperial Gazetteer,[68] was navigable for small vessels for some distance inland. Tyndis sent goods to swell the

65 Cf. Peri.. 56.
66 Tarn. G.B. I. p. 372.
67 Peri., 56.
68 Imp. Gaz., XX. 164.

quantities into Muziris. Muziris and Nelcynda gradually attained so great an importance during the period of the author of the 'Periplus that the fame of Broach was completely eclipsed.[69]

Pliny[70] also speaks of "another port and a much more convenient one, ..., Barace by name. Here king Pandion used to reign, dwelling at a considerable distance from the mart in the interior, at a city known as Modiera. The district from which pepper is carried down to Barace in boats, hollowed out of a single tree, is known as Cottonara." He says further that "the black pepper fetched 4 denarii a pound, the white seven and the long five." Pepper, according to him, was gathered from inland trading houses on buffaloes to Muziris and Nelcyanda, packed in huge sack, loaded upon barges, thence taken to Bacare, reloaded upon large Greek ships, carried to Berenice by the monsoon, on camel to Coptos, down the Nile to Alexandria and then crossing the Mediteranean sea brought to Puteoli and Rome.

The importance of pepper-trade in India is evidenced by a large number of Roman coins found in the areas Nelcynda and Muziris. The Tamil literature (C. 3rd cent. A.D.) also testify to the export of pepper from this area in exchange for gold and Roman coins.

CINNAMON:— It was much used and appreciated by the Romans. Strabo[71] locates it in Arabia, Ethiopia and Southern India and finally mentions "a cinnamon - bearing country" at the end of the habitable countries of the south, on the shore of the Indian Ocean.[72] The Indian vessels carried it upto Socotra or Guardafui whence it was supplied to Rome through the Nile route by the Arabian traders.[73] Cinnamon was falsely attributed to S. Arabia and East Africa, only because of the

69 Cf. Rawlinson, Inter. Ind. W. World, p. 120.

70 Pliny, VI. 26 : Pliny speaks of pepper-trade of India (XII. 27) and distinguishes between long. black and white peprer.

71 Strabo, XV. IV. 19; XVI. IV. 25; XV. I. 22.

72 „ I. IV. 2.

73 Cf. Schoff, p. 6.

secret understanding between the Indians and Arabs not to cross Ocelis into the Red Sea. Curiously enough, this secret was tightened up even after the discovery of the Hippalus. Even the author of the Periplus did not know that malabathrum was only the leaf of cinnamon. He[74] says that malabathrum, exported from the coast of Bacare was gathered "from the places in the interior" in so great a quantity that they required "large srhips." The Periplus indicated that Cinnamon was also brought from Singanfu (China) by way of Chumbi and in 'silent trade' handed over to the Besatae, "a tribe of men with short bodies and broad, flat faces and by nature peaceable, almost entirely uncivilized" coming every year on the border of the land of this, (Peri. 65) who "carried the products in great packs..." Then the natives brought three sorts of malabathrum into India, to the mouth of the Ganges for sihpment at Gange to the western marts of India like Muziris and Nelcynda[75] for exportation to Rome.

Pliny[76] says that "Syria also supplies the malabathrum, Egypt also produces it in still greater quantity. But the king that comes from India is valued more highly, it is said to grow there in marshes ..... in point of price it approaches the marvellous, the pound ranging from one denarius to four hundred; while the leaf itself reaches 60 denarii a pound."

Cinnamon-trade was also, like pepper carried on mainly by the sea-route, as it is mentioned in the Digest-list. Ceylon[77] was always the main seat of cinnamon production. Laufer[78] concludes that "the greater part of the cinnamon supply came from Ceylon and India, India being expressly included by Strabo."

74 Peri., 56.

75 Peri., 62-5; Ptol., VII. 2. 15-6. Pliny, VII. 25. for the natives, Besatae.

76 Pliny, XII. 129.

77 Watt, Com. pro. Ind.. p. 313 ; De Candolle-Origin of culti--vated plants. p. 146.

78 Sino-Iranica, p. 543.

NARD:—It is a perennial herb of the Alpine Himalaya, which extends eastward from Garhwal and ascends to 17,000 ft. in Sikkim. In India it is largely used as an aromatic adjunct in the preparation of medicinal oils.[79]

Schoff[80] says that "nard is the root from the lowlands, as distinguished from spikenard, the leaf or flower from the mountains, a totally different spices." Nard is the root of the ginger-grass, native in west Punjab, whereas spikenard is a perennial native of the Himalayas. Oil extracted from nard or spikenard was used in Roman trade as medicine and perfume.

The Periplus records that nard was exported from Barbaricum (39) and spikenard was exported from Barygaza (49) which was again supplied from Ozene and from the Upper country through Poclais. The three kinds of spikenard mentioned in the Periplus (48) owe their names to the places of their production, i.e., "the Caspapyrene (of Kashmir), the Paropanisene (of the Hindukush) and the Cobolitic (of the Kabul valley)." The Periplus also mentions "spikenard brought through the place, Ganges" (63), which was very possibly the product of the Himalayas, shipped in considerable quantity to Nelcynda to be reshipped for exportation to Rome. (56).

Pliny[81] says that "Leaf-nard varies in price according to the size." Nard of the larger leaves were sold at 40 denarii a pound, that of the smaller ones at 60 and that of the smallest ones at 75 denarii a pound. He observes that spikenard held the first place in Rome among the ointments of his day. He says that genuine spikenard oil contained costus, amonum and other elements. He calls the Gangetic spikenard as "Ozaenities" (XII. 26) which, however, raises doubt whether it came from Ozene as mentioned in the Periplus.

Both nard and spikenard are included in the Digest-list and hence they might have been carried by the sea-route. The different ports for exportation of nards in the Periplus also

79 Watt, Ibid, p. 793.
80 Schoff, p. 170.
81 Pliny, XII. 26.

suggests the same fact. Of course, the names like Assyrian and Achaemenian, of nard indicate that nard passed through the land-routes of these countries as well. Cosmas refers to export of nard to Ceylon (XI. pp. 363-67).

COSTUS:—The Periplus mentions that costus was exported from Barbaricum (39) on the Indus and from Barygaza (49). It was the product of Kashmir valley. It was used in the Roman empire as a spice, a perfume and ointment.

Pliny sees two types of costus on the island of Patale at the mouth of the Indus. He[82] states that its price in Rome was 5 denarii per pound. He speaks of its use in the making of ointments. Mentioned as it is in the Digest-list, it was bourne by the sea-route.

Laufer [83] opines that "real costus was peculiar to Kashmir" and "it is equally possible that Persia had a costus of her own or imported it from Syria as well as from India." This practice of exporting costus from India continued even upto the 16th cent., when it "was shipped from India to Ormuz and thence carried to Persia and Khorasan."[84] The Bṛhat saṃhitā mentions its use for the preparation of perfumes and tooth-sticks. (LXXVII. 5, 6, 10 & 32).

BDELLIUM:—It is an aromatic gum of a small tree native in N. W. India, and it is closely allied to myrrh and frankincense.

The Periplus mentions that it was exported from Barbaricum (39) and Barygaza (49). It notes that "along the coast" of the bay of Gedrosia[85] "there is nothing but bdellium (37).

Pliny[86] says that the inferior type of bdellium came from India to Rome where it fetched price of 3 denarii per pound.

Frankincense and gum-resins are included in the Digest-list and so their conveyance by the sea-route is indicated.

82 Pliny, XII. 25.
83 Sino-Iranica, p. 464.
84 Cf. ,, p. 464.
85 "Stephanus calls Carmania, a county of India and Barygaza, a port of Gedrosia, very famous."
Cf. Tarn, G.B.I., p. 260 & p. 484.
86 XII. 19.

The Tamil poem tells us that incense was sold in Kāveripaddinam. Tais incense might have been procured from the plants of C. India and the Coromandel coast.

ALOES:— It was an important article of ancient trade. Both Pliny[87] and Dioscurides[88] say that most of the supplies of aloes came from India. Medical writers like Scribonius and Galen speak of gumalces of India. Galen[89] states that Indian aloes and Indian lycium were carried on camels from India by way of Palestine to Phoenicia. The Śilappadhikāram also states that aloes-wood was brought to the market of Puhar whence it might have been exported to the west. Aloes are mentioned in the Digest-list and hence they might have been exported to Egypt by the sea-route also. Kauṭilya mentions aloes of Kāmṛūpa. (Joṅgaka, Doṅgaka and Pārasamudraka) - II. XI. 79).

INDIGO:—The Periplus[90] records that it was exported from Barbaricum on the Indus. It "was valued in the western Asia, Egypt and the Mediterranean countries as a dye and as a medicine."[91]

Pliny[92] says that it is a substance imported from India, used as a dye and a medicine.

Laufer[93] remarks that the Latin term "Indicum" itself indicates that Indigo had its origin in India. The indigo-plant, introduced into Persia from India is discussed by Abu Mansur under the name of Nīla. It is interesting to note the conclusive statement of Laufer[94] that "the Chinese at one time imported Indigo from Persia, where it was doubtless derived from India. Hence we may assume that India spread it through Persia to China in later years.

87 Pliny, XXVII, 14.
88 Dios., III. 22.
89 Galen, XI. 821.; XII. 26.
90 Peri., 39.
91 Schoff, p. 72.
92 Pliny, XXXV. 25-7.
93 Sino-Iranica, p. 370.
94 ,, p. 371.

LYCIUM:—It was derived from the barberry plants of the Himalayas at elevations of 6,000 to 10,000 ft. It yielded a yellow dye and an astringent medicine. The Periplus records that it was exported from Barbaricum (39) and from Barygaza (49). Pliny[95] says that lycium was sent by Indians in the skins of camels and rhinoceroses. Dioscurides[96] and Scribonius[97] imply trade in lycium carried on by the land-route. The Romans, however, took to the sea-route after the discovery of the monsoon.

SESAME OIL:—It was an important product of India in the 1st cent. A. D.. The Periplus states that "the coast of Ariaca is a fertile country yielding .... sesame oil" (40). It records how "ships are fitted out from Ariaca and Barygaza bringing to the farside mark-t-towns (like Opone) ... sesame oil" along with other things; (14) and how ships returning from Damirica ... trade with the king's officers at Moscha, exchanging ... sesame-oil for frankincense." (32). Pliny[98] also speaks of sesame oil exported from India.

CEREALS:—Rice—"Oryza Sativa" is native in India, Burma and S. China. Sushruta[99] speaks of different species of vrīhi (dhānyas) and of their uses as drugs in ancient India. The Milindapañha[100] mentions "Śāli-brīhi-yava-taṇḍula" etc. Watt[101] thinks that its cultivation began in Turkistan, whence it spread to China, India and Persia. De Candolle, as quoted by Watt, says that rice-cultivation in India, though subsequent to that of China, has been a valued crop since the classic period. 'Oryza coaretata,' a wild variety of rice, mistaken to be wheat by Strabo and other Greek writers on India was native in the Indus and Ganges valley.

95 Pliny, XX. 30-31.
96 Dios., 1. 100.
97 Scribo. 19. 142.
98 Pliny, XVIII. 22. 96.
99 Sushruta-saṃhitā ,Ch. 46.
100 Milinda, 4. 1. 27.
101 Watt. Com. pro. Ind, p. 824.-25.

The Periplus records that rice is exported from Ariaca and Barygaza to Opone and other ports in E. Africa (14), from Damirica and Barygaza to the island of Dioscorida (31) and it mentions the coast of Gedrosia (37) and that of Ariaca (41) as the hinterland producing and supplying sufficient rice to the ports of India. Kālidāsa speaks of different paddies -śāli, kalama etc. (Raghu IV. 20 & 37), (Ṛtu. III, 1, 10 & 16; IV, 1, 7, 18, and V. 1, 18.). He reports that Magadha and the lowlying plains of Vaṅga and of the southern plateau produced sufficient paddy. Varāhamihira also speaks of the paddy plants of the different sorts in different parts of our country. (Bṛhat, VIII. 30. XIX. 4-6; 16-18 and XXIX. 2.). Yuanchwang records the abundant growth of cereals in different parts of India, as for example, in Kāshmīr (Beal. I. 148), Sthāneśwar (1. 183), Matipura (1. 190), Ayodhyā (1. 225), Śrāvastī (II. 2), Andhra (II. 217) and Sindh (II. 272). He mentions particularly rice of Tseh-kia (Takka)-(vol. I. 165), lying between the Indus and the Beas including Jālandhar (1. 175), of Kauśāmbī (1. 235) and of the kingdom of Magadha, noted for "the rice for the use of the great" (Beal. II. 82). Thus we see that rice was produced in the plains of the Indo-Gangetic valley and coastal regions of Orissa and Andhra.

WHEAT:—Sushruta[102] says that "wheat is sweet, heavy, tonic, rejuvicient, spermatopoietic; it subdues the Vāyu and pittaṃ and generates the kapham . New wheat is laxative and brings about the adhesion of fractured bones." The Periplus records that wheat was exported from Ariaca and Barygaza to Opone (14), and from Damirica and Barygaza to Dioscorida (31) and to Moscha (32). It mentions the coast of Ariaca as the hinterland for supplying wheat to the ports like Barygaza. Yuanchwang refers to plenty of wheat in Ahichchatra (Beal. I. 200) and in Sindh (Beal. II. 272).

TURMERIC—According to Garcia Da Orta[103] it was much exported from India to Arabia and Persia and there is unani-

102 Sushruta, Ch. 46.
103 Cf. C. Markham, Colloquies. p. 163.

mous opinion that it did not grow in Persia, Arabia, or Turkey but that all came from India. Laufer[104] notes that "the plant (sk. haridrā) is extremely cultivated all over the country in India and probably so from ancient times."

SUGAR:—Indian honey procured from trees, without the help of bees, is mentioned in Strabo.[105] Dioscurides used the prākṛt form 'sakkari' in the sense of honey and noted it as a product of India.

Charaka[106] (a) (C. 1st cent. A. D.) and Sushruta [106](b) mention in detail the different types of sugar-cane and their medicinal effects. This shows the cultivation of sugar-cane and its manufacture into sugar and use as drug is as old as the period of our enquiry. The species named Pauṇḍraka and Naipāla, it may not be unlikely, had their origin in the country of the Puṇḍras and in Nepal.

The Periplus[107] mentions "honey from the reed called Sacchari" exported from Ariaca and Barygaza by ships to the farside markets at Pano and Opone in E. Africa.

The Milindapañha[108] lets us know that "men crush sugar-cane in a mill for the sake of sweetness," showing thereby the practice of sugar-industry in India in its period.

Sugar-cane was produced in many parts of India in the Punjab,[109] in Bengal (famous for Puṇḍri-ākh) and also in Kaveripaddinam. The Śilappadhikāraṃ[110] refers to the maidens of Puhar pounding "pearls using sweet sugar-cane as their pestles." Hence we may suppose that sugar was exported from Barygaza[111] and also from Puhar and Gange.

104 Sino-Iranica, p. 314.
105 Strabo, XV. I. 20.
106 (a) Charaka „ Ch. 27, v. 237-42.
(b) Sushruta „ Ch. 45. v. 149 ff.
107 Peri., 14.
108 Milinda, IV. 3.7.
109 Cf. Pun-nu-tso in Yuan Chwang, Beal I, p. 163.
110 Silappa, Bk. XXIX; Dikshitar, p. 335.
111 Cf. Periplus, 14.

Rostowzev[112] says that "the production of honey was limited "in western countries and "no attempt was made there in Hellenistic and Roman times to learn more of it or to acclimatise any of the sugar-yielding plants in the Graeco-Roman world, though sugar was imported from India, certainly in the Roman but perhaps also in the Hellenistic age."

Kālidāsa also refers to the growth of sugar-cane in his Raghu (IV. 20) and Ṛtusaṃhāra (V. 1, 16) and in Śak. p. 224 and to various processes of sugar-manufacture (Ṛtu. V. 16). He draws our attention to the songs, sung in autumn by the wives of the cultivators watching their Śāli paddy from the shades of the sugar-cane plants. The cultivation of sugar-cane and the manufacture of sugar in different parts of India are also mentioned in the Amarakosha (4. 164), the Bṛhatsaṃtitā (VIII. 30, XIX. 16-18) and by Fahien (Legge. p. 24). The Bṛhatjātaka refers to trade in molasses. ("ikṣuvikāra" in VIII. 13). Yuanchwang witnessed" "many sugar-canes" in in Pun-nu-tso (Beal. 1. 163—Punach, identified by Cunningham with a small state, called Punats by the Kashmiris, Anc. Geo. 128), south-west of Kāśmīr and in Kauśāmbī. (1. 235.).

COTTON:—Cotton was a native of India and woven into cloth from very early times. Herodotus speaks of cotton as a wool born of trees growing wildly in India. Theophrastus (C. 350 B. C.) gives us the first definite conception of Indian cotton cultivation. Manu speaks of cotton thread and cloth, and he regulates the operations of the washermen and of the weavers. India's wealth was highly enhanced by cotton industry which rose to its highest pitch in the shape of Indian muslins held in high esteem and fetching high prices in Roman markets.

The Periplus[113] records that "Indian cotton cloth, the broad cloth called Monache and that called Sagmatogene and a few muslins" are exported from "the district of Ariaca" to

112 Soc. Eco. Hist, Vol. II, p. 1167.
113 Peri., 6.

"E. Africa" (from the calf-eaters to the other Berber country). It[114] speaks of the country of Ariaca as reputed for "cotton and cotton-cloths of the coarser sorts," with Barygaza as an outlet for exportation to the west.

Barygaza was fed with muslins and ordinary cloths from Ozene (48) and from Tagara (51). The Periplus mentions muslins of Ceylon (61), of Masalia (612) and also of "the finest sort called Gangetic," (63) which was definitely the product of N. Bengal and exported through the mart called Ganges.[115] Warmington notes that "from about 100 A. D. onwards much raw cotton was submitted to the looms of Alexandria and Syria." The mention of cotton-cloth and muslin in the Digest-list shows their entry into Alexandria enroute to Rome by the sea-route. The Indica of Arrian records that the cotton of India is whiter and brighter than that of any other country.

Tamil literature speaks of cotton fabrics found in Kaveripaddinam and Madura. The Śilappadhikāram[116] described the streets of Madura as being peopled over with cloth-merchants where several kinds of bundles were piled up, each of a hundred cloths woven of cotton-thread, hair or silk-thread." The same epic[117] describes Puhar and its streets" in certain places of which weavers were seen dealing in fine fabrics, made of silk, fur and cotton." Hence we may suppose that the cotton-goods were exported from these places on the east coast of India in the 2nd and 3rd cent. A. D.

Kauṭilya[118] also mentions cotton-fabrics of "Madhurā, of Aparānta, of Kaliṇga, of Kāśī, of Vaṅga of Vatsa and of Mahisha" as the best. Hence we may expect cotton-fabrics of India to be exported to the west in the 3rd cent. A. D..

Stein[119] mentions cotton cultivation in or around Khotan and refers to some fragments of cotton garments in the ruins

114 Peri, 41.
115 Cf. Schoff, p. 256.
116 Silappa. Bk. XIV, 180-200.
117 Dikshitar, ed. p. 92.
118 Kau., II. XI. 81.
119 Anc. Khotan, 1907. 374, 412, 460. 442.

of the ancient city which may be ascribed to the period from the 3rd to the 8th cent. A. D.. Hence it is not unlikely that cotton spread from India to Central Asia at least by the 3rd cent. A. D..

Kālidāsa refers to both types of cotton-cloth, fine enough to be blown away by breath and coarse canvas-like cotton-cloth, thick and strong enough to be used as tents. (Raghu. V. 39, 41, 63 and 73, VII. 2; IX. 93; XIII. 79 and XVI. 55 & 73; and Vikr. p. 121). The production of cotton in the Gupta-period is referred to in the Amarakosha (4. 116) and Bṛhat-saṃhitā (V. 75 and XXIX. 5). As the Amarkosha mentions wild cotton (4. 116), we may presume that cotton was cultivated as fieldcrops. Trade in cloth is also alluded to in the Bṛhat-jātaka (14. 2 & 18. 1).

woods:

EBONY. It appears as an article of trade of Tyre, referred to in Ezekiel[120] where we see trade in ebony between India and Persia before the Christian era. Warmington[121] also notes that the export from India of ebony and other woods was very old. Indian ships carried it, coasting along Gedrosia and the Arabs monopolised the trade in spices and fragrant woods to feed the Roman markets.

Theophrastus[122] is the first to mention the ebony-tree of India and to make distinction between two kinds of Indian ebony, a rare and nobler one, and a common variety of inferior wood.

The Periplus[123] records that large ships were sent with ebony and other woods from Barygaza to the marts on the Persian gulf like Apologus and Ommana, which, by their geographical positions, were suited to the trans-Arabian caravan trade.

120 Ezekiel, XXVII. 15.
121 Warmington, p. 213.
122 Hist. Plant, IV. iv. 6.
123 Peri., 36.

Pliny[124] says that ebony came to Rome from India and was much in demand there, since the victories of Pompey the Great in Asia, who exhibited it at Rome. He adds[125] that the second type of ebony" grows as a shrub like the Cytisus, and is spread over the whole of India." Solinus[126] notes that ebony was solely sent from India and images of Indian gods were sometimes carved from this wood and similarly drinking cups. Ebony is conspicuous by its absence in the Digest-list and hence it might have been sent by the land-route.

TEAKWOOD: It is the most important buildingtimber of India, as it can resist the action of water. Teak of the forests of Malabar, Travancore, Gujarat and the Malay peninsula is best suited to all building purposes.

According to Theophrastos men[127] built ships of this wood of India in the Persian gulf. The town of Siraf on the Persian gulf was entirely built of this wood and "in 1811 teak was found in the walls of a Persian palace near Bagdad pillaged in the 7th cent. B. C.."[128] Hence we may assume that teak of India was exported to Persia even before the 7th cent. B. C.. The Susā inscription of Darius leads us to infer that Indian teak was popular in the Persian markets and Darius used it in the making of his palace.

The Periplus[129] records that "large vessels are regularly sent from Barygaza, loaded with ..... timbers of teakwood to Ommana Mandagora, a market town beyond Calliena as mentioned in the Periplus (53) was a great centre of trade in teak and blackwood and for ship-building.[130]

Kauṭilya[131] mentions teakwood (Śāka) as one of the forest-products of ancient India, which was controlled by the supe-

124 Pliny, XII. 8. 9.
125 ,, 9, 20.
126 ed. Mommsen, pp. 193 & 221.
127 Theophrastos, V. 4.7.
128 Warmington, p. 214.
129 Peri., 36.
130 Imp. Gaz, VI. p. 383.
131 Kau., II. XVII. 100.

timonium of frankincense. Its mention at the top of the long list of frankincense speaks of its importance as a strong timber. Its manufacture in forests is noted in the Arthashastra as 'productive' and any damage caused to these productive works was liable to fines. This shows that teakwood was an important item of lucrative business in India in the 3rd century A. D. The Brihatsamhita (No. 13) speaks of the efficiency of the house made of teak-wood ("Sarala..... kalpitaha sthanchitaiha").

Blackwood: It is one of the hard woods of the Punjab and of the western India. For its durability it was, as now, highly appreciated for agricultural implements, carriage-frames and wheels, boat-building, furniture and wood-carving.[136]

The Periplus[137] speaks of its export from Barygaza to Omana. Mandgana and Calliena gained importance in this trade line as reported by Cosmas.[138]

Sandalwood: It is a native[139] of S. India, Western Ghats, Mysore, Coimbatore and also of North India. It was known to early Arab traders who visited India and China. The Mahabharata speaks of the Malaya mountain and the sea-coast regions as the places of its production. The Milindapaiha[140] mentions "Sandal-wood of Benares." Charaka[141] speaks of sandal as the best of all which act as poultices and which eradicate bad smell and cure all cases of burns. So its use as a drug in ancient India is beyond any question.

The Periplus[142] speaks of its export from Barygaza to the marts on the Persian gulf, whence it was shipped to the further west.

The Shippadhikaram speaks of Puhar and its streets full of

132 Cf. Sibali, p. 155.
133 Ibid., 36.
134 Imp. Gaz., XIV, 322.
135 Watt, Com. Pro. Ind., p. 976.
136 Milinda, IV, 8, 16.
137 Charakasamhita, Ch. 25, v. 40.
138 Ibid., 36.

of silks, corals, sandal and myrrh. Hence we may assume that sandalwood was exported from this port about the 3rd cent. A. D..

Kauṭilya[139] describes in detail the different types, colours and smells of sandal. He says that sandal was the product of various mountains and of the country of Kāmrūpa. Kālidāsa also speaks of sandal of the Malaya mountain. (Raghu. 4. 48. & 51 - - "Bhogiveṣṭanamārgeṣu chandanānāṃ samarpitaṃ" - 4. 48 and "ālīnachandanau Malayadardurau" - 4. 51). Hence we may suppose that the export of sandal continued unabated even in the 5th cent. A. D..

Laufer[140] remarks that "it is more probable that sandalwood, used in western Asia came from India".

Watt says that "the sandalwood of Mysore and Coorg has not only been known from the most ancient times, but has ranked as the finest quality for centuries."[141]

The Rājanighantu, a medical treatise refers to Barbarica-Chandana. S. N. Majumdar thinks that it was sandalwood imported through the port of Barbaricum. It is not unlikely that from S. India sandalwood was imported to the Indo-Scythia country by means of ships.

It may be noted that sandalwood has been highly recommended by Varāhamihira for the making of houses, beds, and seats (Bṛhat, LXXIX. 2 & 12) and of images (LIX. 5). The Gupta period being the period of plenty and prosperity, cosmetics and perfumes were used by both men and women. The chief cosmetics were agaru, both white and black (Raghu, VI. 60; XIV. 12; XVI. 50; Māl, II; Kum, V. 34; VII. 9, 14, 15, 17, 23 & 33) and sandal-paste and harichandana (Ṛtu, 1. 2, 4 & 6; II. 21; III. 20,; V, 3. VI. 6. 12 and Raghu, XVII. 21). Sandal wood was rubbed into paste or oil which was largely used as toilet.

Cosmas records the export of sandalwood along with other

139 Kauṭilya, AS. II. XI. 78.
140 Sino-Iranica, p. 552.
141 Watt. Com. Pro. Ind, p. 978.

things from "the inner countries, east of Cape Comorin" to Ceylon, which, by its geographical position commanded the sea-routes to both the eastern and western countries. (Christian Topography, pp. 363-373). Yuanchwang also refers to the sandal-wood and the Chan-tan-ni-po (chandaneva) trees of the Malaya mountains. (Beal, II. p. 232).

BHŪRJA-LEAVES: The Bhūrjatrees supplied North India with a bark convenient for writing (Kau, II. XVII. 100 & Bṛhat, LI. 14) and wrapping. They are not to be produced on the north of the Himalayas. The export of the Bhurja bark to Khotan is proved by the Dutreuil de Rhins Ms and by the tiny fragment, A. Stein[142] discovered on the plaster wall of the Endere temple Cella. Kālidāsa mentions these trees of the Himalayan region (Raghu, 4. 73).

BAMBOO: When Chan Kien in 128 B. C. reached Ta-hia (Bactria), he was surprised to see walking sticks made from bamboo of Kiuń. Hirth[143] takes it to be a finished product of bamboo imported in a larger quantity. On enquiry Chan-kien was reported by the people of Tahia that they had bought them in India. This report led the Chinese to the discovery of Yunnam. Laufer[144] speaks of the ancient trade-route running from Sec Wan through Yunnam into the N. E. India, whence the square bamboo in the shape of walking canes was forwarded to Bactria in the 2nd century B. C.

Pliny[145] says that "the peoples of the East employ reeds in making war .... The reeds of India are placed highest of all. .... The Indian bamboo is of the size of a tree, as we see in the case of the specimens frequently found in our temples. The bamboo grows specially on the banks of the river Chenab." Thus we have little doubt of the abundance of bamboo in ancient India, of the highest quality and of its export to Rome for use in the making of temples.

142 A. Stein, Khotan, p. 362.
143 J. America Orient. Soc., Vol. XXXVII., 1917, p. 98.
144 Sino-Iranica, p. 535.
145 Pliny, XVI. lxv.

Kauṭilya informs us of different types of bamboo. (II. XVII. 100). Bamboo was largely used for the making of houses and furniture. Kālidāsa makes a frequent mention of bamboo-forests and various articles made of it. Fahien refers to a five-storied structure of Bamboo on a four-wheeled car at Pāṭuli-putra (Beal. Intro. LVI). The Brhatsamhitā also mentions uses of bamboo (XLIV. 4). Baskets made of canes and bamboos are referred to in the Amarakosha (10. 30). Yuanch-wang also records the existence of two big forests of bamboos, the Yashtivana of large bamboos, (ii. 145) and the Karandave-ṇuvana (ii. 159); in the country of Magadha. From all these references, we may assume that bamboo formed an important forest-product of India from the economic point of view.

MINERAL PRODUCTS: India was, as even now, rich in minerals and from very early times was known as "ratnaprasū" (yielding jewels). The oft-quoted passage from Megasthenes[146] is no exaggeration - "It (India) has also underground numerous veins of all sorts of metals for it contains much gold and silver, copper and iron in no small quantity and even tin and other metals which are employed in making articles of use and ornament as well as implements and accoutrements of war." Pliny[147] used the term "gem-bearing" with reference to India and her rivers. Pliny's 37th book is a mine of informations on mineralogy of India. Besides, we come across Indian gems and stones from the collections of the Greeks and Romans and their rings and jewellery. The practice of collecting gems became very common in Rome in the 1st cent. B. C. and we may cite the names of emperors like Ceasar, Vespasian and Hadrian as collectors. Cameo-engraving was a new art encouraged[148] by the emperors. India was the source of gems supplied to Rome and Greece, enlisted in the Book of Revelation, in Dionysios Periegetes (1104-24); and in the Digest-list.[149] Thus trade in precious stones and gems

146 Fragment I, McCrindle, Megas. and Arrian. p. 31.
147 Pliny. XXXVII. 200.
148 Cf. Pliny, XXXVII. 6. 22; 14-17; 81-2; 185 & 200.
149 Digest-list, XXXIX. 4.16. 7.

connected India with the west from at least the beginning of the Christian era, if not earlier.

DIAMOND: We learn of gifts of precious gems made by the tributory princes to Yudhiṣṭhira on the occasion of the Rājasūya.[150] The Rāmāyaṇa[151] speaks of gifts of jewels (ratnāni) made by the Sāmudras (sea-going merchants) of Kautya, Aparānta and perhaps of the Kerala country (Kevala ?), in addition to that made by merchants of Udīchya, Pratīchya and Dākṣināṭya. Thus diamonds were abundant in the epic India, and were naturally exported to the outside world by the Sāmudras, mentioned above. Ball[152] says that "besides indirect proof that the east was the source from whence the diamond originally came to Europe, definite references to India and in India, to the eastern coastal regions, make their appearances in the works of the Greeks and the Romans; but it is in sanskrit literature and naturally so, that the first mention of the localities is to be found." Haima (Himalayas), Matanga (Krishṇā Godāvarī), Surāṣtra, Pauṇḍa, Kaliṇga, Kośala, Vena Gaṅgā and Saubira are the places in[153] which diamonds were said to occur.

The Periplus[154] states that "they (the Graeco-Romans) send large ships to the market-towns (Muziris and Nelcynda)" from which "are exported great quantities of transparent stones of all kinds, diamonds and sapphires."

Pliny[155] describes Indian diamonds as "Adamas, found out in a stratum of gold but in a substance of a kindred nature to crystal." He includes under adamas other substances probably quartz, iron-ore, emery etc., but he also says that diamond possessed the greatest value.

150 Mbh. (ed. Bhandarkar) II. 45. 32. "Sarvaratnānyupādāya Pārthivā vai janeswara."

151 Rāmāyaṇa. Ayo. Ch. 82. 8.

152 Economic Geology, Part III, Ch. I. p. 1.

153 Cf. Manimālā, by Raja S. M Tagore. Cal. 1879.

154 Peri., 56.

155 Pliny, XXXII. 15.

Ptolemy[156] also mentions that "diamond is found in great abundance in the country of the Sabarai towards the Ganges river." He[157] also refers to the town of "Kosa where are diamonds," which belonged "to the country along the eastern bank of the Narmadas" (Narmadā). So it is not unlikely that diamond of the Narmadā and Gaṅgā valley was exported via Barygaza and Ganges respectively in the 2nd cent. A. D..

Kauṭilya mentions the sources of diamonds in "Magadha, Kaliṅga, Sūrpaka, Jaladayasa, Paundraka, Barbara, Tripura, the the mountains such as Sahya and Vindhya, Benares, the mountain of Vedotkata, and the country of Kośala and Vidarbha."[158] He describes in detail the characteristic of the best of diamonds and says with reference to tolldues that "as regards diamonds and precious stones experts acquainted with time, cost and finish of the production of such articles shall fix the amount of toll."[159] Thus Kauṭilya testifies to the first-hand knowledge of diamonds and their different qualities and sources. The Junāgar inscription of Rudradāman of 150 A.D. refers to diamond. ("kanaka-rajata-vajra"). From frequent references to mines and their outputs (Raghu, 3. 18; 17. 66; 18. 22 and Māla, 5. 18) we may infer that they were thoroughly worked and produced precious stones (maṇi' - Raghu, 3, 18; 13, 53 & 59; 18, 42; & 19, 45; Kumār, 8.75 and Megh., 2.16 and Māl., 5.18) and diamond (Raghu, VI. 19) in the Gupta period. The Bṛhatsaṃhitā deals exhaustively with the quality, quantity, and prices of different sorts of diamonds (ch. 80). It enumerates the sources as well, the bank of the Veṇa river, Kośala, Surāṣṭra, Sūrpāraka, the Himālayas, Mātaṅga country, Kaliṅga and Pauṇḍra. (ch. 80. 6-7).

Yuanchwang refers to various places of India producing precious stones - the country of Śatadru (Beal. I.178), Drāviḍa

156 Ptol., VII. 1. 80.
157 ,' ', 64.
158 Kau., AS. II. XI. 77. ed. Shamaśāstry. p. 78 n.
159 Kau., II. XXII. 112.

(II.229); Ocẖali (Aṭali, north of Kāchh, ii.265) and Langala (II. 277). Hence we may naturally expect a considerable trade in Indian diamonds with the outside world.

Watts[160] says that "India was the first and for a long period the only source of diamonds known to the European nations."

AGATE AND CARNELIAN: According to Watts, the murrhine vases and other articles, so highly prized in the Mediterranean countries wese largely of agate, carnelian and the like, and came from the gulf of Cambay which was the chief market for that Indian industry.[161] India has ever been the most important source of the finest red sard which comes chiefly from the Deccan traps, and from the state of Rajpipla. The most important place at which agates are now cut is Cambay but the industry lies at Jubbalpur. Stones are of two classes, one class improved by burning and the other not so.

The Periplus[162] records that "agate and carnelian are exported from Barygaza and its inland city of Ozene."

Pliny[163] says that Murrhine was first known to the Romans after the conquest of Pompey the Great in Asia and he attributes the vessels to Parthia and Carmania. His reference to Parthia and Carmania rather than to the gulf of Cambay means that until the discovery of the sea-route to India, the Romans had to depend on the Parthian land-routes and hence they had been misled as to the true source. Trade in carnelian agates increased with the discovery of the monsoon, specially when emperors like Nero set an example, 25 burnt agates are preserved in the British museum.[164] Agates, Onyx, Sardonyx and Nicolo crept into Rome under Augustus. The specimens of Onyx given by Pliny were Indian, coming from Barygaza via the Ozene route.[165]

160 Watts, ch. III. pp. 93-101.
161 Cf. Watt. p. 561. and Cf. Schoff, p. 193.
162 Peri., 49.
163 Pliny, XXXVII 7. 8.
164 B. M.. (272, 913).
165 Peri., 48 & 49.

Ball[166] points out "Carnelian, agate and Onyx belong to the chalcedonic group of massive, non-crystalline forms of transculent silica. The chief original sources are the enormous flows of the Deccan trap..... In the arts of cutting and polishing them the lapidaries of India have long been renowned.... Nero is said to have paid 300 talents for one of the small cups made of the murrhine or carnelian." He speaks of many places in Hyderabad[167] where these stones are found and worked, besides those of Bengal, Chotanagpur, Jubbalpur, Chanda district and Bombay. Newbold[168] mentions the beds of the Krishṇā, Godāvarī, and Bhīma rivers and of the plain at Bijapur.

A perforation was considered as a proof of a true Indian Sardonyx. Large cameos ceased before 100 A. D. but the material was appreciated in the imperial period. Nicolo was also used in Rome in the 1st cent. A. D. "Marlborough collection contained a perforated nicolo and another huge example, both of which doubtless came from India."[169]

SAPPHIRE: Watts[170] states that Sapphire occurs in various colours and that it is produced in the hills of Malabar. Sushruta[171] speaks of its use as medicine as antitoxic and beneficial to the sight. It has sacred prophylactic virtues and bring good luck to men who wear it.

The Periplus[172] speaks of the export of sapphires from Muziris and Nelcynda to Rome through Greek ships.

W. Goodchild[173] (Precious stones) says that sapphire was the 'hiacynthus' of Pliny and that it was produced in south Ceylon. At the time of the author of the Periplus its natural market was on the Malabar coast.

166 Eco. Geo., p. 504.
167 ,, ,, p. 505.
168 J. Bomb. A. S., XX. p. 37.
169 Warmington, pp. 241-2.
170 Watts, Com. Pro. Ind., p. 556.
171 Sushruta-saṃhitā, Ch. 46.
172 Peri., 56.
173 Precious stones, p. 183.

Pliny says that the hyacinth resembles the amethyst but he draws a nice distinction between them. He refers by the hyacinth to the violet sapphire. The dark blue colour of the hyacinth is also indicated by its comparison with the hair of the Indians made by Dionysius Periegetes.[174]

Ptolemy[175] mentions the island of Taprobane as producing hyacinth.

QUARTZ: It[176] includes—

(a) Rock crystals, white and coloured, which the Romans do not seem to have distinguished from other precious stones. Pliny speaks of crystals in N. H. XXXVII. 9.10.

(b) Agate, carnelian, bloodstone, chrysoprase, jasper, chalcedony, cat's eye, onyx and opal etc.

The quartz of the class of chalcedony was called 'iaspis' by the Greeks. The sapphirine chalcedony went to Rome from India and its mine was situated in the district of Vizagapattam.[177] Pliny[178] speaks of India alone as the source of the Opaque red-spotted Prasius (bloodstone). Green jaspers were in great demand in the Near East where they were used as amulets. The cat's eye[179] came to Cambay from other parts of India.

CRYSTAL: The Romans preferred Indian rock-crystals, says Pliny.[180] Both the Greeks and Romans used them for luxury and ornamentation. Pliny speaks of cups of crystal for cool and iced drinks. Crystals were manufactured in India and specially in Ceylon and were stained into colours of real precious stones. Pliny[181] refers to the glass of India as supe-

174 McCrindle. Anc. Ind., p. 188. ; Cf. Schoff, p. 226.
175 Ptol., VII. Ch. 4.1.
176 Cf. Schoff, p. 223.
177 Pliny, Bk. 37, p. 115.
178 ,, ,, ,, pp. 114 & 115.
179 ,, ,, ,, pp. 131 & 185.
180 ,, ,, ,, 23-24.
181 ,, ,, ,, 36. 66.

rior to all others, because of its being 'made of pounded crystal; and he[182] indicates that "the people of India, by colouring crystal have found a method of imitating various precious stones, beryls in particular."

The Annals [183] of the Han dynasty of China record that the people of the country of Ta-tsin use "in the palace buildings crystal to make pillars; vessels used in taking meals are made." This suggests the use of and trade in crystals both in India and China.

BERYLS: Smith[184] says that "the beryls of Coimbatore... were not to be had elsewhere and were largely sought for by foreign merchants as early as the 7th or 8th cent. B.C." Hence the beryls of India began to be exported outside far before the period of our enquiry.

The beryls of Coimbatore were partly controlled by the Cheras. The Ponnani river is navigable for small vessels for some distance inland, according to the Imperial Gazetteer.[185] So the beryls of Coimbatore would have been sent down this river to Tyndis and Muziris and those of Punnata were sent to Naura and Muziris and those of Salem went to the Chola coast. Beryls of India became very popular in Rome, as we learn from classical authors like Propertius and even from Augustus himself. They might have been exchanged for Roman coins, which were imported in Muziris and Nelcynda in great quantities, as evidenced by the author of the Periplus.[186]

Pliny[187] says, "Beryls are produced in India and are rarely to be found elsewhere." They are cut in a hexagonal form to enhance the colour by the reflection from the angles. They are naturally hexahedral. Pliny adds that "the most esteemed

182 „ „ „ 37. 20.
183 Hou-han-shu, Ch. 88.
184 E. H. Ind., p. 334.
185 Imp. Gaz., XX. 164.
186 Peri., 56.
187 Pliny, 37. 20.

beryls are those which in colour resemble the pure green of the sea..... The people of India are marvellously fond of beryls." He speaks of three important Indian mines: at Padiyur, at Punnata in the S. W. of Mysore and at Vaniyambadi in the district of Salem. He speaks of splendid polygonal columns as relics of Rome's trade with India.[188]

Ptolemy[189] speaks of beryls of Punnata and of Ceylon.

LAPISLAZULI: It is mentioned in Sushruta[190] as having power to cleanse its wearers from all impurities, as antitoxic and as being good to eye-sight.

The word in the text of the Periplus (39) is 'Sappheiros' which may naturally be taken to mean sapphire, a product of India. The Periplus speaks of its export through Barbaricum.

Pliny[191] says that the sapphire of the Romans was an opaque blue-stone with golden spots, coming from Persia, not suited for engraving.

Lapislazuli was in great demand at Rome from very early times for ornament, and also as a pigment ultramarine which was also so much used by the Egyptians in their public buildings. Goodchild[192] also says that "it has been known from very remote times, being much used by the Egyptians, and to a lesser extent by the Assyrians. Epiphanius, Bishop of Salamis says that the Tables of the Law given to Moses were inscribed on lapislazuli. The Romans used it to some extent as a material for engraving on." Beckmann[193] says that lapislazuli came from Bokhara and it was sent thence to India and from India to Europe.[194] This route of commerce agrees with that of the Periplus mentioned above. Ball[195] locates a mountain producing Lapis at Firgamu in Badakshan. Lau-

188 Pliny, 37. 66, 64.
189 Ptol., VII. 1. 86; 4, 1.
190 Sushruta-sam., Ch. 46.
191 Pliny, 37, 39.
192 Precious Stones, p. 240.
193 His. Inv., 1. 467.
194 Cf. Schoff, p. 171.
195 Eco. Geo. Ind., p. 529.

fer[196] also states that "the stone came from the famous mines of Badakshan." Thus it is very likely that lapis was imported from Persia, Badakshan and China to India for reshipment via Barbaricum to Egypt and Rome. Of course, S. N. Majumdar thinks that lapislazuli was obtained in the Vaidūrya mountain, most probably a part of the Satpura range, mentioned in the Mahābhārata.[197]

The Junāgarḥ inscription of Rudradāman refers to "Vaidūrya." Kālidāsa refers to use of lapislazuli (Kum, I. 24; VII.10; Ṛtu., II.5). It is also mentioned in the Mṛcchakaṭikaṃ (Act. IV). Yuanchwang mentions "a lake named Anavatapta in the middle of the Jambudvīpa, to the north of the great snowy mountains" and says that "its sides are composed of gold, silver, lapislazuli and crystal". (Beal. I. 11). He also points out another source of lapislazuli in the kingdom of Kiu-lang-na (equated with kurāṇ, the upper part of the Kokchā valley), (Beal, I. p. 42 n), which is midway between Badakshan and Balkh. Vessels of lapislazuli were also used in India, as evidenced by Yuanchwang who refers to their use among the rich merchant-princes for offering food to Buddha. (Beal, II. p. 129).

GARNET: It is one of 12 kinds, perhaps the alabandic of Pliny's carbunculus."

The almandines are very common in India and they are found with other garnets in Vizagapatam, Trichinpoly, Tinnevelly and Burma. Garnets of Rajputna are the best of all. Garnets and other transparent stones were exported to Rome through Muziris and Nelcynda.[198] Warmington notes that the Romans found these stones at Barygaza.

Pliny[199] speaks of cups of lychnis and of vessels capable of holding a pint and cut of Indian 'Carbunculi.' Hence we may

196 Sino-Iranica, p. 520.
197 Mbh. III. LXXXVII, 8343; (Calcutta ed.); Cf. McCr., Ptol., Majumdar, p. 356.
198 Peri., 56.
199 Pliny, 37, 29.

assume that India traded in these stones with Rome in the 1st century A. D.

Asbestos: Pliny speaks of asbestos, the incombustible fibrous mineral growing in the desert regions of India. It is discovered in Roman sepulchres and hence we may suppose it to be among the best Kottams.

It is mentioned in the annals of the Han dynasty, (Ch. 88) where Kan Ying reports the making of asbestos-cloth in Syria in 97 A. D.

Pliny[200] states that Punjab, Garhwal, Chotanagpur and and Mysore are the main sources of asbestos from which the Romans might have had it by trade.

Turquoise: The text of the Periplus is 'Callaes,' which agrees with Pliny's Callaina.[201] Pliny says that it came from Khorasan, Turkestan and specially from Maaden, supplying the finest ones. Ball[202] also remarks that "the principal known Turquise mines in the world are at Ansar near Nishapur in Khorasan in Persia, to which Tavernier alluded under the name Michebourg." Schoff[203] surmises the existence of a trade-route from Maaden, about 48 miles north of Nishapur down the river Kabul and the Indus to Barbaricum from which these stones were, according to the author of the Periplus, exported to Rome. It appears in the Digest-list.

Now we shall deal with metals like copper, iron and steel, which are things of necessity in our everyday life and not the means of decoration.

Copper: It was smelted in S. India, Rajputana, and at various points of the outer Himalaya like Kulla, Garhwal, Nepal, Sikkim and Bhutan.[204] Sushruta[205] says that "copper

200 Pliny, XIX. 18.
201 Pliny, 37, 33.
202 Ecn. Geo., 436.
203 Schoff, p. 170.
204 Cf. Copper mines in India. *J.R.A.S.* 1904, p. 612.
205 Sushruta., Ch. 46. "Tamram kashyam madhuram lekhanam shalam saram." v. 327.

has a sweet and astringent taste and acts as a liquefacient and corrosive agent. It is laxative and cooling in its potency."

The Periplus speaks of the export of copper in large vessels from Barygaza to Apologus and Ommana (sec. 36). It records not only export of copper but also its import at Barygaza (sec. 49) and at Muziris (sec. 56). The scrutiny of the Periplus leads us to assume that copper was imported at Barygaza from Egypt via Cana only to be re-shipped to the ports on the Persian gulf. War broke out between Rome and Parthia and hence owing to the suspension of a direct route, this indirect trade was established.

Pliny [206] also speaks of copper as export of Carmania to the ports on the Persian gulf and the Red Sea.

Restowzev[207] speaks of copper mines in the West, Egypt, Cyprus, Palestine, Arabia and Lebanon.

Philostratus of Lemnos, C. 230 A. D. mentions a shrine in Taxila in which were hung pictures on copper tablets representing the feats of Alexander and Porus. Hence we may be assured of Indian workmanship in copper in the first three centuries of our era. McCrindle speaks highly of workmanship in copper in Ancient India.[208]

Kauṭilya[209] speaks of copper coins and of the manufacture of copper under the superintendent of metals. Hence copper was looked upon as an important metal in the 3rd cent. A. D.. The coins of ancient India were of lead, slightly alloyed with either copper or tin.[210] Kautilya also speaks of copper as alloy in the manufacture of silver-coins (I. XII. 84). The Periplus (49) also hints at the baseness of Indian coins.

Copper was extensively used for the making of copper-plates for issuing charters in the Gupta period. P. Neogi speaks of copper mines in ancient India, specially at Magadha.

206 Pliny, VI. 26.
207 Soc. and Eco., Vol. II, pp. 1173-74.
208 Ancient India, p. 192.
209 Kau.. AS., 1. XII. 84.
210 Sir Walter Elliot, Coins of S. India, p. 22.

(copper in Anc. Ind. p. 21). A series of oven marks, unearthed from the ruins of Nālandā indicate the melting and casting of copper, and we have had a copper statue of Buddha, discovered at Sultangunj and a copper-made image of Buddha, 80 ft. at Nālandā, referred to by Yuanchwang. (ii. p. 174). Yuanchwang speaks of Nepal as another source of red copper, where "in commerce they used coins made of red copper" (Beal ii. p. 80). Hence it is not unlikely that this red copper might have crept into the workshops of Behar through the Nepal-Vaiśālī-Pāṭaliputra route.

IRON: Iron was used in ancient India as a medicine, as noted in the Sushruta saṁhitā[211] as "generating vāyu," being cooling in its potency, allaying thirst and subduing the deranged Pittaṃ and Kapham.

The Periplus[212] speaks of "Indian iron and steel" with swords exported "from the district of Ariaca" to the country of the Berbers where iron was "made into spears used against the elephants and other wild beasts and in their wars." The Axumites imported iron from India but kept it secret from the Romans who were misled to attribute iron to China. Chwostos thinks that the Romans imported iron-goods more than mere iron-ores.[213] (127, 156).

Pliny[214] speaks of iron as "the most useful and most fatal instrument in the hand of man." According to him the best iron is that made by the Seres, "who send it to us with their tissues and skins." It is not unlikely that the term Seres might have been used to mean the Cheras of the Malabar coast. Schoff[215] points out that iron was produced in Hyderabad and shifted to the Punjab and Persia to be made into steel. The Digest-list also mentions Indian steel of Hyderabad and thereby suggests its conveyance by the sea-route

211 Sushruta sam., Ch. 46. v. 328.
212 Peri., 6.
213 Cf. Warmington, pp. 257-58.
214 Pliny, 34, 39-46.
215 Schoff, p. 172.

to Egypt. Pliny[216] states that papyrus was used for the smelting of copper and iron.

According to Śukra-nītisāra[217] hard iron could have been converted into liquid; this fact indicates iron-manufacture in India of his time.

Ball[218] speaks of iron ore in the Salem district in Madras presidency, and of specular iron in the Chanda district. He cites the example of the famous iron pillar at the Kutab near Delhi to show the amount of skill in the manipulation of a large mass of wrought iron. which is ascribed to C. 400 A.D. by Mr. Fergusson. He also notes that the famous Damascas blades were made of materials found in an obscure village of India and brought by the merchants of Persia. He finds strong reasons to believe[219] that "wootz (steel iron) was exported to the west in very early times possibly 2000 years ago."

Sir G. Birdwood[220] opines that "Iron is frequently mentioned in the Bible under the Hebrew name of Paldah, which is the Arabic 'Fulad' and indicates Indian iron." If he is correct, India must have exported iron to the west in ancient days.

It is interesting to note the importance of Rairh (in Jaypur state) as "a metallurgical centre where industrial operations on a moderate scale were conducted."[221] A number of metal utensils[222] of bronze and iron have yielded to the spade. "The metal workers of Rairh appear to have specialised in the metallurgy and manufacture of iron tools."[223] The richness of the locality is proved by five buried treasures consisting of 3075 silver punchmarked coins. Hence we may as-

216 Pliny, 33, 30.
217 Śukranītisāra, V. ii. 233-35.
218 Eco. Geo., p. 335.
219 „ „ p. 340.
220 Hand book to the Indian court, 2nd. ed. p. 28.
221 Excavations at Rairh, by K. N. Puri, 1938-1940, p. 35.
222 „ „ p. 25.
223 Excavations at Rairh, by K. N. Puri, 1938-39 and 1939-40. p. 35.

sume that iron tools and implements manufactured at the workshop of Rairh were distributed to the outside world and to various other sites of India from this centre in the period between 3rd cent. B. C. and 2nd cent. A. D., as established by epigraphic and numismatic evidences.

Rostowzev[224] asserts that "the best steel used in Greek and the Hellenistic monarchies in classical and Hellenistic times was produced in the East..... The technique for producing steel was derived from India."

Kauṭilya refers to iron (kālāyasa) in II. XVII. 101 and iron-manufacture in II. XVIII, specially to different weapons and instruments, made of iron. Kālidāsa also refers to working in iron by heating and beating a piece of iron with the help of a steel hammer (ayoghana in Raghu, XIV. 33). Many specimens of iron of the Gupta period have been unearthed by the archaeologists; as for example, an axe, a chisel, a dagger, a spoon and a pot, etc. (A. S. I. R. — 1911-12, p. 92. No. 16). But the most important work of iron is the Mehrauli iron pillar of king Chandra, generally equated with Chandra-Gupta II. This pillar still stands near Kutabminar in Delhi, to our great surprise, un-rusted and with distinct letters, inscribed on it. This is quite sufficient to prove the importance of workmanship of the Gupta period. Varāhamihira mentions uses of iron and iron weapons. (Bṛhat., LIV. 8. 39; LVII. 8; LXXXVII. 3 and L. 26). The Agnipurāṇa (ch. CCXLV. p. 886) speaks of five centres for the manufacture of first-class swords, Aṅga (Monghyr and Bhāgalpur districts) and others.

224 Soc. and Eco., Vol. II, p. 1217.

CHAPTER VI.

IMPORT

Now let us begin our enquiry into the commodities imported into India with reference to slaves which, as we have already pointed out, formed the object of export as well.

Before our investigation into the import of slaves from the western countries into India, we should see the position of slave trade in the west in the period of our research.

"Besides the sale of slaves which took place as a result of the capture of cities or other military operations, there was a systematic slave-trade in Greece. Syria, Pontus, Lydia, Galatia and above all, Thrace were sources of supply. Egypt and Ethiopia also furnished a certain number and Italy a few. Of foreigners, the Asiatics bore the greatest value.... but the Greeks were highest of all in esteem and they were much sought for foreign sale. Greece proper and Ionia supplied the petty Eastern princes with courtesans and female musicians and dancers. Athens was an important slave-market.... but the principal marts were those of Cyprus, Samos, Ephesus and specially Chios."[1]

Thus we see that slave-trade was the fashion of the days concerned and India took advantage of this system. However, "Augustus set himself against the undue multiplication of manumissions and the Lex Aelia Sentia (3. A. D.) forbade manumission. The influence of Christianity told upon this trade to no mean degree and in the 2nd cent. A. D. Dio Chrysostom, the adviser of Trajan, the Greek writer "pronounced the principle of slavery to be contrary to the law of nature." Gradually laws were made for the restriction of slavery and of slave-trade in Rome.

1 Ency. Britt., 11th ed., Vol. XXV. p. 217.

Eudoxos[2] (at the end of the 2nd cent. B. C.) who wanted to discover the cape route to India, wished to bring some young singing or flute girls to India for her princes. (Poseidonides).

Strabo[3] points out that Chandragupta Maurya kept himself in the palace under the protection of female guards who might have been imported from outside. The practice of appointing Yavana female slaves in the service of the Indian kings is also confirmed by Kālidāsa in his Śakuntalā.

The import of Greek girls to India might have had its origin in the vast increase of slave-trading with Delos as its centre in the late 2nd cent. B. C. or in early 1st cent. B. C. when Rome had broken the power of the Greeks. If this be the fact, "the mixture of nationalities among the merchants of Delos would show that the traffic was largely in the hands of the foreigners."[4]

The Periplus[5] speaks of import of slaves from Ommana to Barygaza and also of "beautiful maidens for the harem of the king.[6] The ports of Ommana and Apologus were active slave-markets and fed both Rome and India with female slaves.

In a legend about St. Thomas we hear of an Indian king who made a Jewish slave girl to play on her flute and entertain his guest.

We have conclusive evidence of import of slaves to India in the first two centuries of our era by an unique specimen of "the slave Agesilas"[7] who was the architect of Kaniṣka's stūpa near Taxila and who made his relic casket." Tarn notes that the casket "may have been anything from a skilled Greek slave imported from the west to a subject of Kaniṣka."[8]

2 Cf. Strabo., Geo., II. 5. 12.
3 Strabo, (H. & F.'s tr., Vol. III, p. 106.
4 Cf. Tarn, G.B.I., p. 375.
5 Peri., 36.
6 „ 49.
7 C 11 p. 135, No. LXXII. Agisala.
8 Tarn, G.B.I., p. 355.

The Tamil poem[9] also speaks of "dumb mlecchas clad in complete armour" who acted as guards to Tamil kings and who were most possibly Yavana slaves imported from the west.

Animal or Animal—Products.

HORSE: Kāmboja was reputed for the taming and selling of horses in ancient India, as Bodhāyana condemns this practice ("ubhayatodantivyavahāra") of the "Northerners".

The Rāmāyaṇa[10] speaks of the countries of Kāmboja, Bāhlīka and Vanāyu as famous for horses. The king of Kekaya is said to have made a gift of 10,000 horses of Kāmboja[11] The Mahābhārata mentions horses of foreign countries like Kāmboja and Bālhīkā as gifts made by the tributory princes of Yudhiṣṭhira at the Rājasūya. The Jaina Uttarādhyāyana Sūtra also lets us know that no horse could compete with the trained horse of Kāmboja.

We hear of Arabian horses from the Periplus which records gifts of horses to the king and chief of Muza (24) and also the import from Egypt of horses at Cana (28). Kālidāsa also speaks highly of horses of Vanāyu-breed in his Raghuvaṃśa. He describes the westerners (Pāśchātyāḥ, both the Greeks (asvānīkena yavanena - Māl. p. 102) and Persians as cavaliers ("asvasādhanāḥ"-Raghu. IV. 60-65). Thus horses came here naturally from Persia, Arabia and also from Egypt.

Trade in horses seems to have been an important factor in the commercial life of S. India in the 1st cent. A. D..[12] Horses of Parthia are said to have been imported at Puhar from "distant lands beyond the seas."[13]

Kauṭilya also mentions the following classes of horses according to their natural habitats. (1) Kāmboja, (2) Sindhu,

9 Mullaippaddu. - 11. 59-66.
10 Rāmāyaṇa, Bāla. Ch. VI., 21-22.
11 „ Uttara., Ch. 113. v. 2. "Daśa chāsvasahasrāṇiprītidānamānuttamaṃ."
12 Cf. Aiyangar's Hist. of India. p. 66.
13 Paddinappalai, v.185-191. Cf. Maduraikkāñji, 11. 317-25.

(3) Araṭṭa,[14] (4) Vanāyu, (5) Bālhīka (Balkh) (6) Sauvīra, (7) Pāpeya and 8) Taitala. (As. II. xxy. 133). Thus horses are expected to have been imported from countries like Vanāyu and Bulkh (Persia and Afghanistan) to India in the 3rd cent. A. D..

The Bṛhatsaṁhitā refers to the prices, value, quality and uses of horses (horse-keepers in IX. 35, horse-grooms and horse-riders and horse-dealers - "aśvaharāḥ" in XV. 26). Varāhamihira regards horses as gems ("dvīpahayavanitādīnāṃ svaguṇaviśeṣeṇa ratnaśavdo'sti" in LXXX. 2), definitely for their utility and economic value. Cosmas states that the Indian traders took the Persian horses to Ceylon where the king used to purchase them, exempting them from custom duties. (XI. pp. 363-67). Bāṇa mentions "a stable filled with the king's favourite horses from Vanāyu, Āraṭṭa, Kāmboja, Bharadvāja, Sindh and Persia". (H. C., C & T., ch. II. 69. p. 50). Yuanchwang also speaks of many Shen horses of Persia (Beal, II, p. 278), which, we may easily infer, might have been first imported to India and then the surplus was exported to Ceylon.

SILK: The import of silk into India has already been referred to in connection with its export. China became famous in ancient times for her richness in silk. It is interesting to note that the Chinese silk materials, after crossing central Asia, reached India through the Parthian traders. Silk might have compensated for the trouble and cost which the traders had to undergo for the long and tedious route by which they had taken bamboo from India.

"At a period probably a little later than 300 A.D. knowledge of the working of silk travelled westward and the cultivation of the silkworm was established in India. According to a tradition the eggs of the insect and the seed of the mulberry tree were carried to India by a Chinese princess concealed in the linking of her head dress. The fact that Seri cul-

14 Punjab, according to Cunningham, p. 171., p. 247 ; Cf. *G.A.* M.I. (Sircar D. C.)- p. 186.

ture was in India first established in the valley of the Brahmaputra and in the tract lying between that river and the Ganges renders it probable that it was introduced overland from the Chinese empire."[15]

"From the Ganges valley the silkworm was slowly carried westward and spread in Khotan, Persia and C. India."[16] It is very curious that instead of going directly from China, the secrets of silk industry went from the Gangetic valley to the far off Khotan and other countries.

Plant-Products.

SESAME: G. Watts[17] speaks of Persia and Central Asia as the house of sesame. He suggests that "it was probably first cultivated somewhere between the Euphratis valley and Bukhara south to Afghanistan and Upper India and was very likely diffused into India proper and the archipelago, before it found its way to Egypt and Europe."[18] Herodotus[19] also says that it was cultivated by the different peoples of Iran, like the Chorandmians, Hyrcanians, Parthians and others. Hence we may assume that sesame was imported from Persia into India from very early times.

But it is noted in the Encyclopaedia Britannica[20] that "the plant has been cultivated in the tropics from time immemorial and is supposed on philological grounds to have been disseminated from the islands of the Indian archipelago." Megasthenes[21] mentions the cultivation of sesame in India. It occurs in the Atharvaveda and in the institutes of Manu.

Aellius Gallus brought back from his expedition to Arabia the report that the Indians expressed oil from sesame.[22]

15 Ency. Britt., Vol. 20, p. 663.
16 Ibid, p. 663—4.
17 Sesame Oil, p. 11 ; - Handbook of Commercial products, No. 21.
18 Cf. Laufer, p. 291.
19 III. 117.
20 Ency. Brit, 11th ed. Vol. XXIV. p. 701.
21 Strabo, XV. 1. 13.
22 Pliny., VI. 28. 161.

During the time of Pliny sesame was exported from India where they made oil from it.[23] Sesame oil is also frequently mentioned as oil for sacred lamps in the Jātakas.

Sushruta[24] mentions that "the use of sesame oil is recommended in cases of cut, cleft, punctured, severed lacerated, blistered, thrashed or contused wounds and ulcers and in burns and scalds whether due to the application of heat or any vesicant alkaline solution, as well as in bites of wild beasts and birds, etc. and act beneficially in baths, unguents and lubrications." The Bṛhatsaṃhitā mentions the uses of sesame for increasing the fertility of the soil (LV. 2 & 17), as erotic remedies (LXXVI. 7 & 9), and also as articles of worship to the deities and the manes (XLVIII. 30, 35 and 77). The Bṛhat-jātaka refers to the trade in sesame seed (VIII. 13). Thus sesame or its oil was more a matter of export than that of import in the period of our enquiry.

FLAX AND LINEN: The Mahābhārata[25] speaks of 'cloths of linen' presented to Yudhiṣṭhira by Scythians, Tukhāras and Kaṅkas, perhaps imported from the Mediterranean world by land-routes as suggested by the following evidences. Linen garments are also mentioned in the Rāmāyana.[26]

The Periplus mentions 'figured linens' imported at Barbaricum[27] and Muziris and Nelcynda.[28] "Thin clothing and inferior sorts of all kinds" imported at Barygaza[29] might have been perhaps those of flax.

Pliny[30] says, "Babylon was very famous for making embroidery in different colours and hence stuffs of this kind have obtained the name of Babylonian. The method of weaving cloth with more than two threads was invented at Alex-

23 Pliny XVIII. 22. 96.
24 Sutrasthāna., Ch. 45. v. 112.; "chinna-bhinnaviddhotpiṣta."
25 Mbh. (H.D.S.) Sabhāparvaṇ, 49 22-25.
26 Rāmāyaṇa, Adi, Ch. 199.
27 Peri., 39.
28 ,, 56.
29 ,, 49.
30 Pliny, VIII. 74.

andria." The "undressed cloth made in Egypt for the Berbers"[31] was most probably of linen, made from flax. Schoff says that flax was in very general use in all Mediterranean countries.[32] Hence both the author of the Periplus and Pliny lead us to assume that flax was imported into India from Egypt. Pliny[33] attaches great importance to flax and linen in the life of the Egyptians and the classical peoples. For many ages, Egyptian flax[34] occupied the foremost place in the commercial world.

Laufer[35] remarks that "flax is the typically European, hemp the typically Asiatic textile. Surely 'Linum usitatissimum' was known in ancient Iran and India.... It was probably introduced into India from Iran, but neither in India nor in Iran was the fibre ever used for garments; the plant was only cultivated as a source of linseed and linseed-oil" Watts[36] says that according to De Candolle the linseed and flax plant is "indigenous to certain localities situated between the Persian gulf and the Caspian and Black seas." About the use of the plant in ancient India Manu[37] speaks of the garments of flax to be worn by students. Sushruta[38] also tells us of 'atasī' (linseed) oil as having a slight smell of flesh, as being used for poultices and being pungent, light, penetrating and laxative. He says that "kshauma (linseed) oil is sweet (madhuraṃ), it subdues the bodily vāyu (vātaghnaṃ) and is strength-giving (valāvahaṃ).

PARCHMENT: Laufer[39] says that "before the introduction of rag-paper the Persians availed themselves of parchment as writing-material. ... A fragment of Ctesias preserved by

31 Peri., 6.
32 Schoff, p. 72.
33 Pliny, XIX. 1-3.
34 Ency. Brit., 11th ed., Vol. x., p. 485,
35 Sino-Iranica, p. 294.
36 Com. Pro. Ind., p. 721.
37 Manu, II, 41.
38 Sūtrasthāna, Ch. 45, v. 115.
39 Sino-Iranica, p. 563.

Diodorus (II. 32) mentions the employment of parchment in the royal archives of Persia." Chang kien's record shows the use of parchment throughout the Parthian empire in the 2nd cent. B. C. Early in the 2nd cent. B. C. Eumenes II of Perganum[40] had started its manufacture on a large scale in his slave-factories and hence it became the common writing material in W. Asia. Tarn[41] believes that parchment was imported to India in the period of her Greek rule and it was used in Greek letter to Augustus from Barygaza. Parchment was taken even to Rome and in her business-life it is said to have superseded wooden tablets in the 1st cent. A.D..

WINE: It is interesting to note that wine has been dealt with in great details in the Charaka Saṃhitā[42] and in the Sushruta saṃhitā.[43] These works state that all species of wine act as mild purgatives, appetising and subdue the deranged vāyu and kapham. They mention wine prepared from grapes, raisins and dates. Surā in different names, made of rice-paste, barley, sugarcane, treacle and the Ariṣṭas with their efficacies mentioned therein speak of the growth of this industry in the period of our enquiry to which, Charaka and Sushruta may be ascribed.

Wine-distilling was a native industry in India. We hear of 'soma', an intoxicating drink, extracted from the 'soma' plant of the Himalayas, and used in the Vedic sacrifices. The Taittirīya Brāhmaṇa[44] speaks of surā and of its preparation. By the time of Pāṇini[45] however, Kapisa became reputed for its grapes and wine.

Theophrastus[46] states that vine is produced in the mountainous regions of India. Strabo[47] says that Sindh produces

40 Cf. Pliny. XIII. 70.
41 Tarn, *G.B.I*, p. 373.
42 Charaka saṃhitā, Ch. 27, vs. 176-193.
43 Sushruta ., , Ch. 45, vs. 174 ff.
44 Tai. Brāh., 11. 6.
45 Pān., IV. 2. 99.
46 Theophrastus, Hist. Plant, IV. IV. 11.
47 Strabo, XV. 22.

vine. The ancient Chinese discovered vine in Kipin.[48] The Wei-Su[49] states that grapes were exported from Palai in Southern India. In Jātaka No. 183 grape-juice (muddikā-pānaṃ) of intoxicating properties is mentioned. Kauṭilya[50] also speaks of different sorts of liquor particularly 'Kāpiśā-yanī surā' (i.e., wine of the Kāpiśa country). Kālidāsa mentions wine of cocoanut (Raghu, 4.42). of Kaliṅga and also that of grapes. (Raghu, 4.65). Wine from molasses, rice and sugar-canes is also hinted at in the Ṛtusaṃhāra (V. 16). Wine is mentioned in the Bṛhatsaṃhitā as used for secular and religious purposes. ("Pepīyate madhu madhau saha kāminībhiḥ" —XIX. 18, and "Pūjayet surākṣīrāsavādibhiḥ" - XLVIII. 28). Kālidāsa refers to many liquor-shops. (Śak. VI). Hence we may assume that India produced her wine, which gave a very lucrative occupation to both the producer and seller. but wine was also imported from the west into India. Wine-making began in Asia minor and Syria from very early times. Wine of the Damascus valley was an important article of export in the period of Ezekiel.[51] Strabo speaks of Greek wines of the Aegean islands and the Asiatic coast near Ephesus to be the best of all.[52] Wine was made at Laodicea on the Syrian coast near Antioch. Strabo speaks of its richness and its export to Alexandria.[53] Laufer says that "the grape wine [54] belongs to the ancient cultivated plants of Western Asia and Egypt."

We hear of Arabian wine at Muza. The Periplus records that "the country around Muza" produces a great deal of wine."[55] It was grape-wine. The Periplus also speaks of "wine and a great quantity of dates," exported from Ommana

48 Tsien Hansu, Ch. 96 A. p. 5.
49 Wei-Su, Ch. 102. p. 8.
50 Kau, AS. II. XXV. 120.
51 Eze., XXVII. 18.
52 Strabo, XIV. 1. 15.
53 ,, XVI. 11. 9.
54 Sino-Iranica, p. 220.
55 Peri., 24.

and Apologus to Barygaza.[56] "Viticulture was in a high state of development in ancient Iran."[57] According to Posidonius, grape-wine was made in Damascus, Syria and from vines planted by the Persians. (Athenaeus'.) Wine imported at Barygaza might have been date-wine, as suggested by its mention in the Periplus along with dates. It might have included also grape-wine, as the mountainous regions round Ommana produced the muscatal grapes. The Periplus tells us that Italian and Laodicean wines were imported into Barbaricum (39), Barygaza (49) and Muziris and Nelcynda (56). It mentions Italian wine preferred by Indians to all others, i.e., Laodicean and Arabians (49).

Pliny also described in detail wine of different quantities made in different countries of Europe,[58] and mentions that "the wine made from date-palms .... is used by the Parthians and Indians and by the whole of the east."[59]

Wine brought by the Yavanas is also referred to in the Tamil poem where Nakkirar exhorts a Pāṇḍya prince to drink in peace the cool and fragrant wine.

Thus it is not unlikely that knowledge of grape wine was conveyed to India from the west. Kalídāsa[60] also refers to "madhu" (grape wine) in his Raghuvaṃśa in which he speaks of the soldiers of Raghu relieving their fatigue by enjoying madhu in the vine-regions of the Yavana country.

FRANKINCENSE: It is native in Somaliland and South Arabia. Chardin, as quoted in Encyclopaedia Britannica[61] states that it grows also in the mountains of Persia particu-

56 Peri, 36.
57 Sino-Iranica, p. 223.
58 Pliny, XIV, VI. 54; XXIV. 121.
59 " XIV, XIX, 102.
60 Raghu, IV. 65.
N.B. :—Mr. Codrington notes that import of wine in India is mentioned in the Roman text and confirmed by the Tamil text and also by the excavation at Virapatnam. Cf. Jour. Ind. Soc. Ori. Art, Vol. XVI, 1948, p. 45 n.
61 Ency. Brit., 11th ed., Vol. XI, p. 22.

larly Carmania. Arrian lets us know that the best frankincense was exported from the vicinity of cape Elephant in Africa. He says that it was imported at Barbarike on the Sinthus (Indus). The Periplus mentions that it is "shipped" from Mosyllum (10) and from Malao (8). It gives us the following record of the 'Frankincense country with Cana as its market-town. "All the frankincense produced in the country is brought by camels to that place (i.e., Sabbatha the metropolis) to be stored and to Cana; .... and this place has a trade also with ... Barygaza and Scythia and Ommana and the neighbouring coast of Persia."[62] The same source (32) speaks of the harbour of Moscha as the place of exchange: "Ships returning from Damirica and Barygaza .. .. trade with the King's officers, exchanging their cloth, wheat and sesame-oil for frankincense." The Periplus mentions Barbaricum as the only mart where frankincense is imported, (39), most probably by the same ships which take back from India silkyard and cloth, brought thither from China.

Pliny[63] says, "The chief products of Arabia then are frankincense and myrrh. There is no country in the world" (forgetting, however, the Somali Peninsula)" that produces frankincense except Arabia." He adds that the Minaei were the first people who carried on any traffic in frankincense. Pliny[64] also speaks of its storage in the capital, and says that "it can only be exported through the country of the Gebbanitae. ..... The price of the best frankincense is six, of the second best five, and the third best three denarii a pound." According to Pliny the best frankincense is recognised by its whiteness, size, brittleness and ready inflamability. (XII.32). Pliny mentions it as antidote to hemlock. It has been used in the East also as medicine,[65] specially as an external application in carbuncles, blind boils, and gangrenous sores and also as an internal agent in cases of gonorrhoea.

62 Periplus, 27.
63 Pliny, XII. 30.
64 Pliny, XII. 32.
65 Cf. Ency. Brit, 11th ed, Vol. XI. p. 23.

A Tamil poem, Śilappadhikāram[66] speaks of sale of frankincense in Kaveripaddinam.

STORAX: The Periplus (28) speaks of the import of storax from Ḕgypt to Cana which, again, was commercially connected with Barygaza and Scythia (27). It records its import at Barbaricum (39) and at Barygaza (49).

Storax was locally used at Arabia as a means of protecting the gatherers of frankincense from the "serpents" guarding the trees.

Storax was also imported from Syria. Hirth[67] says in his "China and the Roman Orient" that the Syrians "collect all kinds of fragrant substances, the juice of which they boil into suho," which he identifies with storax, "they then sell its dregs to the traders of other countries. In 97 A.D. Kan Ying reported to the Chinese that the Syrians extracted storax from the plants, and sold the remaining portion of the plants to foreigners.

The Periplus[68] mentions two types of ointment imported at Barygaza: one, the most ordinary, "not very costly and not much" and the other, "the choicest ointments brought for the king." The first type includes perhaps its preparation from storax, transferred through different hands.

Pliny[69] mentions use of storax in the making of 'regal ointment' for the Parthian kings.

Watts[70] speaks of styrax Benzoin as "a small tree of the Malay archipelago important as yielding the true Benzoin or Gum Benjamin of commerce." It may not be unlikely that India had her supply of storax also from this portion of the Far East, which was commercially connected with India in the period of our enquiry.

PEACH AND APRICOT: Laufer[71] draws our attention to the

66 Śilap. ed. Dikshitar, p. 92.
67 China and the Roman Orient, p. 47.
68 Peri.. 49.
69 Pliny. XIII. 2.
70 Com. Pro. Ind., p. 1052.
71 Sino-Iranica, p. 540.

transplantation of Chinese peach into India in the period of Kaniṣka. Pear or peach was planted by the hostages sent to Kaniṣka by the tribes west of the Yellow river in the country of the Eastern Punjab known as "Chīnabhukti."[72] The very names of peach and pear, still used as Chīnanī and Chīnarāja-putra respectively speak clearly of their origin in or import from China to India.

SWEET CLOVER: It is the 'melilote' of the Greeks and the Romans, used for the making of chaplets and perfumes and also of medicines.[73]

The Periplus [74] records its import at Barygaza for its being manufactured into chaplets by Indian artisans, only to be reshipped to Rome where it was prized most. Pliny[75] says that it grows best in Campania, Greece, Crete and Chalcidice and that it is used in making chaplets in the Roman world[76] and also as medicine.[77]

Mineral Products.

GOLD: Gold was used in India not only for ornamentation or for coins but also as medicine. Sushruta[78] says that "gold has a sweet and agreeable taste, acts as a tonic or restorative elixir, imparts rotundity to the body and subdues the action of all the three deranged humours of the body ("doṣa-trayaghnaṃ"). It is cooling and antitoxic in its potency and invigorates the eye-sight." (Chakṣuṣyaṃ viṣasūdanaṃ).

Siberia was the main Asiatic source of supply of the griffiin gold in ancient times. Even today it claims to possess greater resources in gold than any other country.[79] In the Achae-

72 Cf. Ta Tan Siyuki, Ch. 4. p. 5.
73 Cf. Schoff, p. 190.
74 Peri, 49.
75 Pliny, XXI. 29.
76 Pliny, XXI. 1-10.
77 ,, XXI. 87.
78 Sūtrasthāna, Ch. 46. v. 326.
79 Mikhaylov, Soviet Geography, 1935. p. 90, as quoted by Tarn.

menid period "there must have been a definite gold-route to Bactria and all or most of the gold would come in the form of gold-dust."[80] The Mahābhārata[81] refers to 'paippīlika' i.e.. 'ant-gold,' of which Megasthenes[82] was also informed by his Indian informants. Tarn has shown that this ant-gold was only the Siberian gold and he notes that the name of 'ant-gold' was no doubt due to the middlemen on the gold-route who wished to prevent their clients discovering the source of supply.[83] He points out further that "somewhere between the reigns of Darius I and Euthedemus the influx of gold from Siberia to Bactria and India, had practically ceased, ... because the movement of peoples in C. Asia had cut the route of gold-trade."[84] Hence in the Greek period there was no gold worth mentioning in N. W. India. The only native gold of India coming from the washings of the upper Ganges and its tributaries is referred to by Megasthenes,[85] Pliny[86] and later on by the Bṛhatsaṃhitā.[87] It is interesting to point out that Alexander's mining engineer Gorgos said that Indian ideas of mining and refining gold were elementary.[88] Megasthenes[89] notes that the Indians had little knowledge of the art of separating gold from dross. This may not be strictly correct because we have references to gold and gold--coins in the Vedic literature but this much we may assume that India had little gold of her own and had to import it from outside. The inscriptions of Darius show that he had to procure gold from Sardis and Bactria. If India had enough gold, he might have

80 Tarn, *G.B.I.*, p. 106. 82.
81 Mbh., II. 50. 1860. (cal. ed)
82 Arrian, Indica. 15, 5 sq.
83 Tarn, *G.B.I.*, p. 107.
84 „ „ p. 109.
85 Strabo, XV. 711.
86 Pliny, XXXIII. 66.
87 Bṛhat, XIV. 31— (Aiśānyāṃ .... Suvarṇabhūḥ) Cf. Warmington. p. 258. N. B. Pliny reports that the country of the Nareae had numerous mines of gold and silver. Ball means Malabar by this country. (Eco. Geo. P. III. ch. 1. p. 177).
88 Strabo, XV. 700.
89 „ „ 706.

procured it along with teak and ivory. Hence we may say that India's gold was essentially imported in exchange for her own commodities. The N. W. India got it from Siberia and the east had probably imported some gold from the rich river-washings of Yunnam and other adjoining countries.[90]

The Periplus[91] speaks of import of gold from Ommana and Apologus to Barygaza. It records further that "silver and gold plate" was imported into Barbaricum and "gold and silver coins"[92] were imported at Barygaza. It is interesting to note that "among the most productive gold-fields in ancient times were those in Egypt, where in the deep mines the enslaved labourers were cruelly maltreated, and in Asia minor where flows the river Pactolus, the source of the riches of Croesus. The Romans obtained their gold in great part from Transylvania, still a gold-field."[93] It may not be unlikely that gold of Egypt and Asia Minor might have crept into India through Omana and Apologus, the intermediate ports of transhipment in the period of Rome's trade with ancient India, as indicated in the Periplus. The Periplus, of course speaks of also native gold, i.e., "gold mines near Ganges and Chryse and gold coin called caltis"[94] which, according to Elliot (p. 137) might have been introduced in the region round Ganges from S. India. However, it is quite clear that in the 1st cent. A. D. northern and western India had to make up the loss of Siberian supply of ant-gold[95] by importing bullion or coins from the Roman world.[96] Barygaza was

90 Marco Polo, II. Ch. 47-58.
91 Peri., 36.
92 ,, 49.
93 Ency. Brit., Vol. X, p. 482.
94 Peri., 63.
95 N.B. Prof. Schiern (translated by Childers in Indian Antiquary. Vol. IV. p. 225), concludes, "The gold-digging ants were originally neither the real ants, as the ancients supposed, nor, as many eminent men of learning have supposed, larger animals mistaken for ants on account of their sub-terranean habits, but men of flesh and blood and these men were Tibetan miners whose mode of life and dress in the remotest antiquity were exactly what they are at the present day."
96 Peri., 36. Cf. Warmington, pp. 279-332.

the main centre of importing gold from Ommana, whether Arabian gold re-shipped[97] or gold from the Hyctanis in Carmania.[98]

Works of gold jewellery were discovered in treasure-hoards at Taxila, which, Marshall thinks, were buried in haste beneath the floors of the houses under the menace of the Kushan invasion. Some pieces of gold-jewellery show striking similarities with the contemporary art of South Russia and furnish interesting evidence of the trade-relation between India and the Black sea-region in the Śaka-Parthian period.[99] In the Kushāna period the supply of gold was supplemented by imports from the Near East by way of the Persian gulf. Tarn[100] clearly states that the Kushāṇa kings imported gold for their coins from the western world. Marshall[101] also notices that "an ingot of gold found in the Śaka-Parthian city of Sirkap (No. 214) bears a significant resemblance to the ingots which were traded in the Roman world.

Gold was an important article of trade in India in the 2nd and 3rd centuries A. D., as the Śilappadhikāram[102] speaks of sale of gold in Madura and Puhar and as the Arthaśāstra[103] of Kauṭilya mentions gold, its sources and different tests and also coins.

Jewellery was one of the most important industries of ancient India. The archaeologist's spade has unearthed at Bhita one gold ring, one hollow gold bead, two miniature gold beads tied together, one wheel of gold and also a disc of gold engraved with a human face (A.S.I. - A. R. - 1911-12. p. 92). Kālidāsa refers to works of gold in Māl. p. 4 & 59 and Vikr. 1. 15, specially to rings looking like snakes ("nāga-mudrāsanāthamaṃgulīyakaṃ" in Māl. pp. 4 & 69 and rings with

97 Peri. 36.
98 Pliny, VI. 98.
99 Marshall, Taxila, Ch. 30. p. 616.
100 Cf. Tarn, G.B.I. p. 104. Cf. Warmington, p. 299,
101 Marshall, 11, Taxila, II. p. 620.
102 Silappa.; Cf. Maṇimekhalai, 2. 1. 29.
103 Kau., II. XIII. 85.

the name of the owners engraved cn them ("maṇivandhanotkīrṇa .... aṃgulīyakaṃ" - Śak.). The Mandasor inscription mentions women wearing necklaces. We hear of a reputed jeweller, Viṣṇudāsa at Kusumapura in the Mudrārākṣasa (Act, VI.). Gold was so important in the eye of the then Indians that Nārada sanctioned full rights of women to inherit "Strīdhana". i.e., works of jewellery. Hence India had most probably to import gold from outside to meet her needs.

Yuanchwang refers to another source of gold in the country of Pololo (Bolor), south of the Pamir valley. "Here", he says, "is found much gold and silver, the gold is as red as fire". (Beal, II. p. 298). As this country is on his way from China, we may suppose that gold might have had its access to India during his period. The stronger reason for such supposition lies also in his records about the adjacent region of the T'sung-ling mountains where he saw "merchant-bands and caravans", "occupied in transporting their goods, with many thousand camels and getting profits" from earlier times. (Beal, II. p. 303).

LEAD, TIN AND COPPER: Sushruta[104] says that "Zinc and lead are vermifugal, liquifacient and corrosive. They have saline taste. (kaṭukrimighne). The three metals were required for Indian currency during the first few centuries of the Christian era. The Romans used lead largely for the making of water-pipes and soldered these with an alloy of lead and tin.[105] Pliny looks upon lead and tin as varieties of the same species. He uses the term 'minium' in its modern sense of red lead.

Pliny[106] says that "India has neither brass nor lead but exchanges precious stones for them." The coins of India[107] were of lead, slightly alloyed with either copper or tin. Rome

104 Sūtrasthāna, Ch. 46. v. 329.
105 Ency. Brit., 11th ed., Vol, XVI, p. 314.
106 Pliny, XXXIV. 17.
107 Elliot, Coins of South India, p. 22.

supplied India with these base metals. Pliny[108] distinguishes between black and white lead and says that the former came from Spain and Britain to Rome. The Romans got almost all their tin from Spain, i.e., the mines of Lusitania and Gallaecia specially towards the close of the 1st cent. A. D. and they sent it to India by sea through the port of Cane.[109] The Romans got supply of tin also from Cornwall about the 1st cent. A. D..[110] They imported copper from Cyprus according to Pliny.

The Periplus speaks of import of copper, tin and lead at Barygaza[111] and at Muziris, Nelcynda and Bacare[112] The importance of tin as an imported article to India is hinted at by the fact that the sanskrit word "Kasthira" is borrowed from the Greek term "Kasseteros." Marshall[113] says that "the Indo-Parthians at Taxila ... would have little difficulty in importing copper from the west or obtaining it more immediately from Kashmir and Afghanistan, part of which they annexed to their dominions in the 1st cent. A. D.". The chief sources of supply of copper to the N. W. India might have been the copper mines of Afghanistan and perhaps Kashmir whereas the imports in the Periplus (49 & 56) got nearer markets in western India. Excavations at Bhita have brought to light many old specimens of copper, one female figure, one basin, three tripods, cups, lids, bangles and a pot; (A.S.I., - A. R., 1911-12 - pp. 89-91) and they are supposed to be the works of the Gupta period. The mighty statue of Buddha, found at Sultangunj (Bhāgalpur), now preserved in the Birmingham museum speaks of the Gupta art in copper. (Gupta Art - V. S. Agarwala - p. 17). Varāhamihira also refers to works of copper, a throne in the Bṛhatsaṃhitā, XLVIII. 46 and an idol in LX. 5.

108 Pliny, XXXIV. 47-50.
109 Peri., 28.
110 Ency. Brit., 11th ed. Vol. XXVI. p. 995.
111 Peri., 49.
112 ,, 56.
113 Marshall, Taxila, Vol. II, p. 565.

Though Yuanchwang refers to native copper (teou - shih) of India (Beal, 1. 89), specially of the region of Kuluta (Kulu district - 1. 177) and of Brahmaputra (modern Haridvāra) - 1. 198; it was too meagre to meet the needs of our country and it might have been imported from outside in and after the Gupta period. Copper industry was of vital importance in the Gupta period, as Amarasiṇha mentions copper-smiths (tāmrakuṭṭaka) next to the blacksmith and goldsmith in the list of artisans. (Amarakosha - 2nd kāṇḍa, Śūdravarga). The Bayana Hoard (Altekar) contains a copper-spouted vase. Copper was largely used for coins, images, utensils, seals and charters of land-grants in the Gupta age.

Dr. Watts[114] says that "tin has been known in India from a very remote period and early held an important place in sanskrit materia medica of Sushruta. The supply was probably obtained from Burma or from some of the tin-producing islands of the Malay Archipelago; between which and India trade must have existed in very ancient times."

RUBY: It is "the most valued of all gem-stones, a red transparent variety of corundum or crystallised alumina. It is sometimes termed 'oriental ruby' to distinguish it from the spinel ruby ..... The oriental ruby is a mineral of very limited distribution. Rubies are mentioned in the Bṛhatsaṃhitā as born of sulpher, kuruvinda and crystal, (LXXXII) and also by Kālidāsa (Raghu, XVIII. 53 and 59). Its most famous localities are in Upper Burma, principally in the neighbourhood of Mogok, 90 m. N.N.E. of Mandalay."[115] Schoff[116] also notes that "rubies are found in much greater quantities

114 Dict. Eco. Pro. Ind., Vol. VI, pt. IV. pp. 57-62. N. B. Wheeler in "Indus Civilization"' (p. 58) points out that "tin is absent from Beluchistan and rare in India, though old workings are said to exist in the Hazaribug district of Bengal and it was known in Afghanistan."

115 Ency. Brit., Vol. 19, p. 615; N. B. Gerini says that "from Barbosa (1520 A. D.) it would appear that a portion of Upper Burma was in his time still called Balassia, from which the so-called 'Balas-rubies' w'ere exported." p. 39.

116 Cf. Schoff, p. 227.

in Burma and Siam." Hence we may expect that India might have had her supply from Burma or Siam. Dr. P. C. Bagchi refers to the mines at Badakshan from which ruby might have been imported here (India and Central Asia, p. 27).

ANTIMONY: It has been known from ancient times. In the Old Testament it is mentioned as being used for beautifying eyes. A Chaldaean vase made of metallic antimony is believed to date back to 4000 B. C.. It occurs still in China.[117]

It is the sulphide ore. It came from Eastern Arabia and Carmania. Mr. Ball[118] refers to mines of antimony still working at Beluchistan and Afghanistan. The Periplus mentions import of antimony at Barygaza[119] and at Muziris and Nelcynda.[120] The Romans might have carried it on their way to India.

Pliny[121] describes it as found in silver mines, "a stone made of concrete froth, white and shining. .... its principal use in medicine being for the eyes." It was also used as toilet for painting eye-brows.

REALGAR: It is the red sulphide of arsenic. The Periplus[122] speaks of its import at Barygaza and at Muziris and Nelcynda. Pliny[123] says, "The redder it is, the more pure and friable and the more powerful its odour, the better it is in quality ..... It is most powerful for its antisceptic properties." It was obtained mainly in Persian and Carmania. "The mineral supply occurs with ores of silver and lead in mineral veins. Realgar has been used as a pigment and in pyrotechny for producing a brilliant white fire; but it is now replaced by the artificially prepared compound. The other native arsenic sulphide, $As_2 S_3$ is known as Orpiment"[124]

117 Ency. Brit., Vol. 19. p. 67.
118 Eco. Geo., p. 164.
119 Peri., 49.
120 " 56. Cf. Smith, Fine Art, 279, 301.
121 Pliny, XXXIII. 33-34.
122 Peri., 49 & 56.
123 Pliny, XXXIV. p. 55.
124 Ency. Brit, Vol, 19, p. 11.

Kālidāsa mentions its use in various cosmetic preparations. (Raghu, XII. 80; Kumāra, 1.55). Realgar and orpiment were the special products of Syria, as stated in the Wei-lio.[125] Hence we may expect that realgar came to India either from Syria or from Persia and Carmania.

ORPIMENT: It is the yellow sulphide of arsenic. Though the Jātaka[126] speaks of mineral substances like "vinaddhā (añjana - monosilā-haritāla - hiṅgulaka-hemarajatakanakadhā-tusatavinaddhapatimaṇḍitappadese") of India, the Periplus mentions its import at Muziris and Nelcynda[127] by large ships from the west. Pliny[128] speaks of mines of arsenic in Carmania.

Orpiment was used as one of the constituents for making gunpowder in ancient India, referred to in Śukra.[129] It was also used in preparing paper for the preservation of old sanskrit manuscripts from the ravages of insects.

Ball[130] remarks that "the United Kingdom, Austria, China and Turkey in Asia contribute to the supply of arsenic, both orpiment and realgar." Watt says that "all these forms of arsenic (oxide) including orpiment and realgar have always been imported from Burma and China."[131] Hence we may expect that of these countries China and Turkey might have sent these to our old India, which was commercially connected in the period of our research.

SILVER: Sushruta[132] says that "silver has an acid taste, is laxative and cooling in its potency and destroys the pittaṃ and vāyu" This shows its use as a medicine in ancient India.

125 Cf. Hirth, p. 73. Wei-lio, p. 49 gg.
126 Jāt., V. p. 416.
127 Peri., 56.
128 Pliny. VI. 26.
129 Śukra, IV. vii. 411-15.
130 Eco. Geo, p. 162.
131 Com. Pro. Ind., p. 92.
132 Sūtrasthāna, Ch. 46. v. 327. "rūpyamamlaṃ saraṃ. . . . pitta-vātanut.'

"Solomon is said to have hired fleets of ships from Tarshish for the purpose of obtaining from Ophir the silver used in decorating his palace and temple." The latter place has been identified by some writers as a port or district on the Malabar coast; but at least it is undoubted that "Pliny who wrote about 77 A. D. referred to India as a country whence silver was obtained for the use of the Romans."[133] The above extract establishes the high antiquity of silver-extraction in India. Kauṭilya also speaks of silver, its differents varieties and sources in India.[134]

But import of silver was also no less important in the history of India, specially in the period of our enquiry. During the Greek period Demetrius stationed himself at Alexandria-Kapisa near the Silver-mines of the Panjshir valley. This headquarter was well-suited to be the principal mint of the Greek province. Demetrius improved the communication between Bactra and the Indus valley, by which silver might have had easy flow into India.[135] "Nearly all the silver that has been found at Taxila, apart from the coined metal, comes from the Parthian city of Sirkap. In as much as the Parthians were in possession of a large part of Afghanistan, including the Kabul and Kandahar regions, there can be little doubt that they obtained their main supply of silver from that part of the world. Some of the Parthian silverware appear to have been imported from the west."[136]

The Periplus records that "silver and gold plate was imported at Barbaricum,[137] and that "gold and silver coin" was imported at Barygaza..[138] Silver thus imported in the ports by the sea-route from the west, rather, from the Mediterranean world, might have been taken further up the Indus to Taxila under the Parthian rulers. The Parthians had good taste for

133 Cf. Dict. Eco. Pro. Ind, Vol. VI , Pt. III pp. 238-43.
134 Kau., II. XIII. 86.
135 Cf Tarn, G.B.I., p. 137.
136 Marshall, Taxila, II. p. 607.
137 Peri., 39.
138 „ 49.

Graeco-Roman culture and if we look at the silver objects of Taxila (Pls. 187-189), we shall be convinced of Hellenistic influence in many of them and these silver objects had a ready sale in the Parthian markets of Taxila. John Allen[139] also remarks that "silver was rare in ancient India and the metal for the coins was probably imported..... So rare was silver that it is called white or bright gold. (rajatam hiraṇyam in Śatapatha Brāhmaṇa xii. 4.4.7.)." It may have been then that silver was rarely seen except in the form of coins in the period of our review and that money and silver was synonymous.

The Romans probably advanced the art and science of the metallurgy of silver further than any other race upto their time. The Romans had several large and important silver workings, using perhaps the first fire metallurgy to produce silver metal and then converting the metal into priceless silver ornaments. According to Pliny, "the ore was washed and sieved five times, fused with lead and then cupelled for pure silver."[140]

We hear of numerous silver mines in Arakan and the adjoining Burmese territory.[141] Hence it may not be unlikely that silver was also imported from Burma and Arakan, where the Kaliṅgas and Andhras had penetrated in the 3rd cent. B. C, as referred to by Megasthenes.

AMBER: We hear of amber in Kipin (Kāshmīr), men-

139 Cat. Ind. Coins, Introduction, lxxiv.
N.B.:—
(a) Pliny says that "the Setae have the most abundant mines of silver." In the country of the Nareae there are a very great number of mines of gold and silver in which the Indians work extensively." Rall means by these mines the old mines of S. India in the districts of Kodapah and Karnul near Malabar. (Eco. Geo. Pt. III. p. 231).
(b) Gorgus, the engineer of Alexander the Great found in the kingdom of Sopeithes (neaf mod. Lahore), besides salt-mines, rich mines of silver and gold.
(Cf. Rostowzev. Vol. II. p. 1172).

140 Ency. Brit., Vol. XX, p. 682.

141 Upper Burma Gaz, Pt. I, Vol. ii, pp. 301-4 and Pt. II. p. 527.

tioned first in the Chinese records.[142] The Chinese Annals also speak of amber in Ta Tsin and Persia, and amber is listed also as a product of Herat, Khotan and Samarkand. Gold-amber is assigned to Arabia.[143]

While Jacob concludes that the Arabs secured amber from the Baltic, Laufer[144] reasons that amber occurs also in southern Russia and Rumania.

Pliny says that amber is found in Scythia in two localities, one white and the other red. This amber of Scythia might have been traded by the Iranian Scythians to Iran. Pliny states that the Roman traders exchanged it in India for pearls and other precious stones. Marshall finds out nine beads of amber at Taxila, of which two from the Maurya stratum of the Bhir mound and seven from the Śaka-Parthian stratum in Sirkap. Hence we may assume that amber was imported into India by the Oxus-Taxila route since the Maurya period upto the Śaka-Parthian one perhaps through the medium of the Scythian traders.[145]

"Amber was much valued as an ornamental material in very early times. It has been found in Mycenaean tombs; it is known from lake-dwellings in Switzerland .... Beads of amber occur with Anglo-Saxon relics in the south of England and upto comparatively recent period it was valued as an amulet."[146] The same source informs us that "some of the amber districts of the Baltic and North sea were known in prehistoric times and led to early trade with the south of Europe. Amber was carried to Olbia on the Black sea, Massilia on the Mediterranean and Hatria at the head of the Adriatic, and from these centres it was distributed over the Hellenic world." Hence we may expect that amber of the important centres of Europe as mentioned above was naturally im-

142 Tsien-Han-su, Ch. 96. A p. 5.
143 Cf. Sino-Iranica, pp. 521-22.
144 „ „ „ p. 522.
145 Marshall, Taxila, Vol. II. p. 740.
146 Ency. Brit., 11th ed, Vol. I. p. 793.

ported to India in the Hellenic period. Burma was also reputed for her amber which "had been worked for centuries. .... The Burmese amber is yellow or reddish, some being of ruby tint..... Most of the Burmese amber is worked at Mandalay into rosary-beads and ear-cylinders."[147] Mr. Ball also refers to the amber mines at Payentoung (Burma), "which appear to have been worked for a very long period."[148] Hence we may conclude that amber of Burma, if worked in the period of our review, might have been imported into India.

TOPAZ: Topaz is mentioned in the list of gems in the Bṛhatsaṃhitā (LXXX. 5) and in the Raghuvaṃśaṃ (XVIII.32).

It is the favourite of Jupiter[149] and it glitters like gold. Ball[150] says that "the so-called Brazilian ruby is often a yellow topaz. The Brazilian sapphire is a topaz of deep celestial blue... Of the occurrence of topaz in India, there appears to be no authentic record; a reported discovery in Rajmahal hills being open to question.[151] Ceylon yields a not inconsiderable proportion of the topaz of commerce."[152]

The Periplus mentions the import of topaz at Barbaricum (39), at Barygaza (49) and at Muziris and Nelcynda (56). Watts doubts its production anywhere in India. Schoff notes that "it was an important item in the eastbound exports of Egypt under the Ptolemies and Rome."[153]

GLASS: It has been pointed out in the previous chapter that glass was manufactured in India from very early times.[154] Mr. Jayaswal remarks that "glass in India was a manufacture long before it became known to Ceylon (3rd cent. B. C.)". Pliny's note on the superiority of Indian glass is also interesting to mention.

147 Ency. Brit., 11th ed. vol. I. p. 794.
148 Eco. Geo., p. 57.
149 Śukra, IV, ii. 83.
150 Eco. Geo. Ind., p. 530.
151 Geo. Report, 1848-49. p. 51.
152 Ball. Eco, Geo. p. 531.
153 Schoff, p. 167.
154 Supra, p. 285.

But we have also clear evidence of the fact that glass was imported into India from the west. The Periplus records the import of "vessels of glass" at Barbaricum (39), of "crude glass at Barygaza (49). Rostowzev says that glass was extensively used in Egypt and Phoenicia."[155]

We know from Pliny[156] that glass-making originated in Phoenicia and the sand of the river Belus was long used for this industry. During his time a white sand at the mouth of the river Volturnus was much used for glass-making. Warmington[157] says that "Alexandria, Tyre and Sidon were famous for their works in glass which spread all over the Roman empire and very far beyond. Alexandria is also noted to have become preeminent in certain branches of glass-working"[158] about the 1st cent. B. C.. "Wheel engraving and enamel painting appear to have become Alexandrian speciality in the 1st cent. B. C. and probably continued also in the two succeeding centuries. The engravings of Alexandria produced also wheelcut designs both in intaglio and in raised relief.... The discovery of glass blowing may well be credited to the Syrian glass-workers... who appear to have moved to Italy already early in the 1st cent. A.D. and in the course of this century Italy probably became one of the chief glass-producing areas of the empire."[159] Thus we may expect that India might have imported glassware from Italy, Syria and Egypt in the period of our enquiry.

Marshall[160] says that "all the glass vessels found at Taxila are of foreign origin and nearly date from the 1st cent. A. D.. The best preserved are small flasks of sea- or jade-green glass identical with those which were common throughout the Roman empire during the early centuries of the Christian era. ... M. Hackin has recently unearthed a surprisingly rich

155 Rostow., Soc. & Eco. Hist., II. p. 1211.
156 Pliny, XXXVI. 65.
157 Warmington, p. 271.
158 Ency. Brit., Vol. X, p. 410.
159 Ency. Brit., Vol. X, p. 410.
160 Marshall, Taxila, Vol. II, p. 685-7.

collection of glassware at Begram, almost all of which was imported from Syrian or other factories round the coasts of the Mediterranean." The glass-vessels of Taxila might have been imported by the landroutes of the Middle-east and also by the sea-route through the ports of western India mentioned in the Periplus.

The looking glass was widely manufactured in India and used as an article of toilet. (Raghu - XIV.37; XVII.26;XIX.28 and 32; Kumāra-VII. 26 and VIII. 11). Kālidāsa also refers to a golden mirror (Raghu. XVII.26), definitely meant for the richer section. The Bṛhatsaṃhitā mentions trade in glasses (XLII. 8 & 10) and uses of mirrors (IV. 2, XLIII. 57 and LVIII. 39). The Äjantā frescoes also show uses of mirrors. Hence glasses might have been imported from outside and manufactured here in the Gupta period also, as in earlier days.

Now let us conclude this chapter with an enquiry into coral which is a hard substance growing on the bottom of the sea composed of the skeletons of zoophytes.

CORAL: Sushruta[161] says that "pearls, corals, diamonds, sapphires, vaidūrya (lapis lazuli), crystals etc. are beneficial to the sight and cooling in their potency. They are antitoxic and act as liquefacient or corrosive agents."

Red corals were one of the principal assets of the Roman empire in its trade with the east. Coral "has been from remote times very highly prized for jewellery, personal ornamentation and decorative purposes generally. About the beginning of the Christian era a great trade was carried on in coral between the Mediterranean and India, where it was highly esteemed as a substance endowed with mysterious sacred properties"[162]

Pliny[163] remarks that corals were as highly prized in India as pearls were at Rome. The Gauls ornamented their swords,

161 Sūtrasthāna, Ch. 46, v. 330.
162 Ency. Brit., 11th ed, Vol, VII, p. 131.
163 Pliny, XXXII, 11.

shields and helmets with corals until the beginning of the Roman trade in corals with India. Pliny hints at a large import of corals to India so much so as to cause scarcity even in their places of production. The Mediterranean sea was then, as now, the bed of red coral fisheries. There were black[164] corals in the Red Sea and along the Arabian coast but they were not so much prized. Corals of Rome were interchanged with pearls of India.

The Periplus[165] mentions import of red corals at Barbaricum, Barygaza and at Muziris and Nelcynda. It mentions its import from the further west into Cana (28), whence it was reshipped to India in Arab or Hindu bottoms. Laufer[166] says that "Persian corals have found their way all over Asia ..... and the coral encountered by the Chinese in Kipin[167] may also have been of Persian origin."

The Maṇimekalai[168] describe the whole streets of Puhar as "full of silks, corals etc." Elsewhere Madura is also noted for superior pearls and corals. Uraiur is also praised for corals in the Tamil poem. Hence we may expect that corals were imported in the 2nd and 3rd centuries A.D.. Kauṭilya[169] also speaks of "Alakandaka and Vaivarṇaka," two varieties of coral, which is possessed of ruby-like colour. The commentator notes that the first type is "obtained in the mouth of the river of Barbara" and the second one is had from "Vivarṇa which is the name of the ocean near the island of Yavanas." Hence it may not be unlikely that Kauṭilya hints at the import of corals by their very names from the Mediterranean world in the 3rd cent. A. D..

The value of corals in that period may be easily inferred

164 "The black coral, formerly abundant in the Persian gulf and for which India is the chief market has a wide distribution." (Ency. Brit. Ibid - p. 131.).

165 Peri., 39, 49 & 56.

166 Sino-Iranica, p. 525.

167 Tsien Hansu, Ch. 96 A. - p. 5.

168 Maṇimekalai, 2.11.29.

169 Kau., II.XI. 78.

from the statement of Śukra, of course, belonging to a later period. He [170] says that corals weighing one tola deserve half the price of the gold of the same weight. Watt[171] says that "in addition to being used for adornment ornamental corals have been used in Hindu medicine from a very ancient time and are mentioned by Sushruta."

Kālidāsa speaks of the river Tāmraparṇī of the Pāṇḍya country and the Indian Ocean as prolific sources of corals (Raghu, VI.16 and 31). The Bṛhatsaṃhitā mentions corals as one of the gems of India (LXXX.5) and their uses (LI.37). It records that the fluctuation of their prices is due to hoarding (XLII. 10). From this we may infer that corals were frequently used as ornaments, and formed an important article of trade in the Gupta period. Corals are also referred to in the Amarakosha (3. 133).

170 Śukranīti, IV. ii. 161.
171 Eco. Pro. Ind., Vol. II, p. 532.

CHAPTER VII.

Trade Laws

The Great epics of India, the Dharmaśāstras, the Arthaśāstra and other works of Indian literature show clearly how the socio-economic ideas regulating the relation between the individuals and the state had gradually evolved and firmly established themselves on Indian soil. The king had to do everything for fairness of justice to all individuals of the state.[1] Hence laws were made in the Smritis and the Arthaśāstra regulating trade so as to bring things at fair price to all and to make possible the all-round prosperity of the state as an organic whole with special eye to the interest of all classes and their harmonious development.

STATE CONTROL: The Śāntiparvaṇ of the Mahābhārata[2] calls upon the king to guard his finances carefully, since kings depend upon kosha which leads to the welfare of the state. Thus we may presume on the basis of the available evidences that the king became mindful of his duty to protect trade of his country, in as much as traders contributed much to the royal treasury. Bodhāyaṇa[3] says that "the king should lay just duties on other marketable goods according to their intrinsic value without oppressing the traders." (anupahatya). Nārada warns Yudhiṣṭhira that "he should realise only such dues as prescribed in the canon (yathoktaṃ) ard no arbitrary imports are to be realised from merchants who come from distant countries for gain."[4] Dr. B. C. Sen[5] draws our

1 Śānti, Ch. 56, 87 and 89. (P. T.)

2 " " 119, 16. "Koshashcha satataṃ rakshyo yatnamāsthāya rājabhiḥ; Koshamulā hi rājānaḥ kosho vṛddhikaro bhavet." (P. T.).

3 Bodhāyaṇa, 1. 10 18. 25.

4 Mbh., II. 5. 115. (H.D.S.) "Dūrāt vanijo lābhakāranāt."

5 Dr B. C. Sen — J. Dept. Letters, XX. 1930. p. 54.

attention to the fact that "the interests of traders, hailing from different countries were safeguarded. In ordinary circumstances they must have been assured of a large measure of security and protection. To provide messengers from foreign countries with accommodation was a matter of great concern with a prince who was anxious to enhance his popularity at home." (Tirojanapadehi āgatānaṃ dūtānaṃ nivesanaṭṭhānādīni vānijānaṃ suṁkāni savvakaraṇiyāni attanā va akāsi. Vol. IV. p. 132).

Manu[6] says that "having well considered the rates of purchase and of sale, the length of the road, the expense for food, the charges of securing the goods, let the king make traders pay duty." The Mahābhārata[7] also enjoins that "the tax on internal industries is fixed after taking into account the outturn, receipts and expenditures and the state of the arts."

The concept of royal duty to encourage trade and arts is seen in a fully developed form in the epics and the Smritis. Both the epics attach importance to Vārttā. In the Bālakāṇḍa we find the king studying Vārttā, while in the Ayodhyākānda (Ch. 103) Rāmaṇ is found explaining to Bharata the duty of protecting traders. The Śānti-parvan (89th chap) describes agriculture, cattle-rearing and trade as the source of this worldly life.[8] Hanumān teaches Bhīma that Vārtā upholds the universe.[9] Nārada[10] draws our attention to the need of properly protecting the people and asks Yudhisṭhira whether the

6 Manu, VII. 127.

7 Mbh., XII. 87. 14.
"Yogakshemañcha saṃprekshya
vaṇijām kārayeṭ karāṇ ;
utpattiṃ dānavṛttiṃ cha
śilpaṃ samprekshya chāsakṛt."

8 "Kṛṣi-go-rakṣā-vāṇijyaṃ lokānāmiha jībanam." - (Śānti. v. 7. Ch. 89). (P. T.).

9 "Vārtayā dhāryate sarvaṃ dharmairete dvijātibhiḥ."

10 Śānti. Ch. V. 79. ; Sabhā, Ch. V. 76-84.
"Kvachit svanuṣṭhitā tāta
Vārtā te sādhubhirjanaiḥ;
Vārtāyāṃ saṃśritastāta
lokoyaṃ sukhamedhate." II. 5, 69 ed. Bhandarkar.

people including the sections of trade and industries are happy. The Śāntiparva[11] emphasises in many places the duty of protection on the part of a king.

Kauṭilya[12] says that "the king shall offer facilities for commerce, construct roads for traffic both by land and water and set up market-towns." He enjoins that "the king should endear himself to the people by bringing them in contact with wealth"[13] and as "wealth and wealth alone is important" the king should pay attention to traders who increase national wealth.

DIFFERENT KINDS OF TOLLS: The Jātakas refer to duty on articles of trade, on imports and exports, to excise-duty on wines and liquor (chātikahāpaṇa) which the grāmabhojakas realised from the villagers and to tolls collected at the gates of a city.[14] That trade and commerce was an important source of income to the royal treasury is implied in the following gāthā:-[15]

"So should he spoil his citizens —
so apt by trade to gain,
A failing source of revenue
will his exchequer drain."

The story of a prince winning over the traders to his side by fixing just and equitable taxes upon them, shows how the king imposed just taxes on traders.[16]

The Mahābhārata[17] speaks of 'Śulka' as the toll on merchandise levied for the protection of the state. The Mahā-

11 Śānti, Ch. 56, 87 and 89.
12 Kau, Bk. II. Ch. I. 47.
13 Ibid, I. Ch. VII.
14 Mahā Ummagga Jat, - J. VI. p. 347. "catūrsu dvāresu suṁkaṁ dāpesi."
15 Jāt, V. p. 248- G. 177.
16 „ IV. p. 132. "Vāṇijānaṃ Suṁkāṇi sabhakaraṇiyāni... sabbesaṁ piyo ahosi.".
17 Mbh, XII. 71. 10. "Śāstrānītena lipsethā vetanena dhanāgamaṃ." (P. T.).

bhāṣya on the Vārtika 'ayasthānebhyaṣṭhak' on Pāṇini[18] cites 'śoulkika' and 'gaulmika' as examples showing thereby that sulka was one of the principal and perennial sources of income to the state payable at the tall-gate. Gautama fixes the toll on merchandise as 1/20th of the value,[19] together with 1/60th of roots, flowers, meat and medicinal herbs etc. He also enjoins that one article every month at less than the market-rate[20] should be given by traders to the king. Evidently the duty is levied in kind but the king's realisation of an article every month reminds us of the ancient system of direct contribution[21] from the traders.

Manu[22] says that "at toll-stations the king shall receive 1/20th of the profit on the price of an article, determined by men, expert in fixing the prices of commodities." Thus he prescribes, like Gautama, 1/20th of the value of the commodity, thus implying the assessment of the duty on the money-value of the merchandise. About 'jalajaṃ' toll Manu[23] says that "the freight for taking a vehicle across a ferry is one paṇa, that of taking a load which can be carried by a man, across a ferry is half a paṇa, the freight for taking a beast or a woman across a ferry is a quarter paṇa and that for taking a man, without luggage is 1/8th paṇa." Sometimes commodities were sold at night in an obscure place avoiding the public highway at a lesser number only to defraud toll dues and Manu has prescribed the penalty of a fine 8 times the value of the defrauded duties."[24]

Kauṭilya[25] points out the functions of the superintendent of tolls and notes that all merchandise must be properly stam-

18 Pān, IV. 2. 104.

19 Kaut, X. 26-27. "Viṃśatibhāgah śulkaḥ paṇye."

20 Gaut, X. 35. "Paṇyaṃ vaṇigbhirarthāpachayena deyaṃ."

21 N.S.B. Gras speaks of the early English custom of the "Priese" or merchants before the introduction of customs duties in his "Early English customs system." pp. 15-20.

22 Manu, VIII. 398.

23 Manu, VIII. 404.

24 " " 400.

25 Kau., II. XXI. 110.

ped with seal-mark and must be exchanged on proper prices and on payment of scheduled tolls at the toll-house. "Those merchants who pass beyond the flag of the toll-house without paying the toll, shall be fined 8 times the amount of tolls due from them." Kauṭilya says that each of the three categories of merchandise, internal, external and foreign, is liable to the payment of toll alike when exported or imported.[26]

Imported commodities shall pay 1/5th of their value as toll. But the superintendent shall receive 1/6th as toll of flowers, fruits, vegetables, roots, bulbs, seeds, dried fish and meat. As regards conch-shells, diamonds, precious stones, pearls, corals and necklaces tolls are to be decided by experts acquainted with the time, cost and finish of the production of such articles.[27] The same author says that 1/10th to 1/5th of the value is to be paid as "toll of fibrous garments, cotton cloths, silk, mail armour, sulphuret of arsenic, red arsenic, vermilion, metals, colouring ingredients, of sandal, brown sandal, pungents, ferments, dress, wine, ivory, skins, raw materials in making garments, carpets, curtains, products yielded by worms and of wool." He adds that "of cloths, quadrupeds, bipeds, threads, cotton, scents, medicines, wood, bamboo, fibres, skins, and clay-pots, of grains, oil, sugar salt, liquor, cooked rice and the like," 1/20th to 1/25th of the value must be paid as toll.[28]

Besides toll-dues, gate-dues amounting to 1/5th of toll-due must be paid, of course, subject to remission if circumstances necessitate such favour.

A careful scrutiny of the above reveals the fact that the duties are levied not in kind but in cash, of course, after proper valuation by experts and that duties on a diminishing scale are levied on three classes of articles, i.e., perishable, valuable and ordinary articles.

Toll dues formed a great part of the revenue of the state

26 Kau., II. XXII. 112.
27 . II. XXII. 112.
28 Kau, II. XXII. 113.

and hence Kauṭilya[28a] has strictly prohibited the sale of commodities "where they are grown or manufactured," so that people or merchants may not deprive the government of such dues. Any such cases of sale of articles in the field without payment of scheduled toll-dues were heavily penalised.

The rate of toll-dues, as mentioned above, throws a clear light on the fact that Kauṭilya is more vigorous than the law-givers of the canon. The assessments of the former are made on value of articles, while those of the latter are charged on profit, i.e, difference between cost-price and sale-price.

LAWS FOR TRANSPORT OF COMMODITIES: Kauṭilya has laid down rules for the regulation of trade between distant parts of the country, each connected again with marts or towns. We know from the Jātakas how trade between different parts of the country was carried on by a number of adventurous merchants who led caravans and who used either great trunk roads or rivers in exchanging commodities. The system of centralisation and proper distribution was well developed in the period of Kauṭilya who enjoins that the superintendent of commerce "shall ascertain the time suitable for the distribution, centralisation, purchase and sale of commodities. That merchandise of the king which is of local manufacture shall be centralised and imported ones shall be distributed in several markets for sale. Both kinds of merchandise shall be favourably sold to the people. He shall avoid such large profits as will harm the people."[29] Commodities of frequent demand shall not be subject to the evils of centralisation. (Saṅkuladosha).

Kauṭilya says that the Sannidhātri realises commercial dues and that he should mark the fluctuations in demand and in prices of local and foreign articles and he should revise the rate of taxation accordingly. He encourages the incoming of foreign goods and enjoins concession, even remission of taxes

28a Kau., II. XXII. 113
29 Kau., Bk. II, XVI. 98.

to the foreign merchants, so that they may derive some profit.[30] "Foreigners importing merchandise shall be exempted from being sued for debts unless they are (local) associations or partners."

Kauṭilya[31] is very keenly interested in "the sale of the king's merchandise in foreign countries. Having ascertained the value of local produce as compared with that of foreign produce that can be obtained in barter, the superintendent will find out by calculation whether there is any margin left for profit after meeting the payments to the foreign king, suchas, the toll, roadcess (vartanī), conveyance cess (ātivāhika), tax payable at military stations (gulmadeya), ferry charges (taradeya), subsistence to the merchants and his followers (bhakta) and the portion of merchandise payable to the foreign king (bhāga)." He has advised to send the valuable merchandise of the king through safe roads to different markets on land; and also through rivers to other countries.

In cases of no profit by selling the local produce in foreign countries Kauṭilya thinks of profitable bartering for any foreign produce. In cases of difficulties to reach the intended market, the merchandise may be allowed to be sold at any market, free from all dues. Kauṭilya advises commodities to be sent by both land and water to profitable markets.[32]

DIFFERENT TYPES OF OFFICERS OF THE STATE FOR REGULATING TRADE AND INDUSTRIES: The Arthaśāstra is a mine of informations about a number of officers engaged by the state for the regulation of trade and industries favouring trade.

(1) The superintendent of mines[33] shall centralise commerce in commodities, manufactured from mineral products. Kauṭilya has prescribed penalty for manufacturers, sellers and buyers of such things outside the prescribed locality.

30 Kau., II. Ch. 16.
31 ,, Arthaśāstra, Bk. I. Ch. XVI. 99.
32 Ibid, II. XVI. "Sarva - deya - viśuddhaṃ."
33 Kau, Arthaśstra. Bk. II, Ch. XII. 83.

(2) The superintendent of ocean mines[34] shall attend to the collection of conch-shells, diamonds, precious stones, pearls, corals and salt and also regulate the commerce in the above-mentioned articles. The superintendent of salt is also appointed to regulate sale of salt.

(3) The examiner of coins (rūpadarśaka) shall regulate currency both as as a medium of exchange (vyavahārikīṃ) and as legal tender admissible into the treasury[35] (koṣapraveśyam).

(4) The superintendent of gold is appointed in the goldsmith's office in the centre of a high road for the proper manufacture of gold and silver jewellery by artisans.[36]

(5) The superintendent of store-house (koṣṭhāgāraḥ) is appointed by the state to supervise commerce (Krayima) and barter and manufacture of rice, oils, etc. (Siṁhanika).[37]

(6) The superintendent of commerce - shall ascertain the question of demand and supply and rise or fall in the price of various kinds of merchandise-products, either of land or water and brought in both ways. He must regulate transport and trade of articles, local and foreign. The Paṇyādhakṣha dealing with women in the course of purchase and sale of various articles is mentioned also in Kāmasūtra.[38]

(7) The superintendent of forest-produce is appointed to "start productive works in forests" and he is to carry on, either inside or outside the capital city, the manufacture of all kinds of articles.[39] The Behar stone pillar inscription of Skandagupta also refers to the royal officer, Gaulmika, who is, according to Fleet, the superintendent of forests. (Fleet, p. 50).

34 Ibid, II. XII. 84.
35 " II. XII 84.
36 " II. XII.
37 Kau, Arthaśāstra, Bk. II. Ch. XV.
38 " " II. XVI. Kāmasūtra, V. v. sutra. 10.
39 „ „ II. XVII.

(8) The superintendent of weights and measures shall have the different units of weights and measures manufactured. He must get all weights and measures of the country properly stamped and traders must pay one kākanī everyday towards the charge of such stamping.[40]

(9) The superintendent of tolls has already been mentioned with all his functions.[41]

(10) The superintendent of weaving is meant for the manufacture of threads, coats, cloths and ropes by qualified persons.[42] Vātsyāyana (C. 3rd cent. - A. D.) also mentions "Sūtrādhyakṣa who had to deal with widows spinning yarn for the government for wages.

(11) The superintendent of liquor "shall carry on liquor traffic not only in forts and country parts but also in camps."[43] He must centralise or decentralise sale of liquor according to requirements.

(12) The superintendent of slaughter-house is appointed to see that "butchers shall sell fresh and boneless flesh of beasts (mṛgapaśu), just killed. He must penalise any diminution in weight owing to the use of a false balance and he must not allow the sale of rotten flesh and flesh of animals which have suddenly died."[44]

(13) The superintendent of ships shall examine the acl counts relating to navigation, shall strictly observe the customs prevalent in commercial towns, and shall look to the interests of foreign merchants, as to those of others, for the smooth working of trade by water.[45]

(14) The superintendent of passports is engaged to issue passes to persons, to the best advantage of the coun-

40 Kau., Arthaśāstra II. XIX.
41 „ „ II. Ch. XX.
42 „ „ II XXII. Kāmasūtra, V. v. sutra. 8.
43 Kau, Arthaśāstra, II. XXV.
44 „ „ II. Ch. XXVI.
45 „ „ II. Ch. XXVIII.

try and Kauṭilya says that "it shall be his duty to keep roads in good repair and to arrest thieves and to secure the safety of mercantile traffic.[46]

(15) The revenue-collectors are also appointed to collect taxes, sometimes with the help of "spies under the guise of merchants" who must ascertain the quantity and price of the royal merchandise and manufactured articles, and who must also regulate the sale of foreign merchandise.[47] The Hirahaḍagaḷḷi plates of Śivaskandavarman of Kāñchī mention one of the officials, named the custom-house officer. (E. I., Vol. 1., p. 5).

Besides these, Vātsyāyaṇa mentions another government officer Āyuktaka appointed in charge of a village who is to look into the affairs of storing and taking out things from the store house and into the works of sale, purchase and exchange of various articles.[48]

Dr. B. C. Sen[49] notes that "so far as the internal administration of a village, the regulation of its trade and commerce and so forth, was concerned, the gāmabhojaka had substantial powers and that the central government did hardly interfere in these matters..... The guild was already a potent force in the economic life of the people. These guilds with the elders at the head probably shared with the chief or gāmabhojakas, appointed by the king, the responsibility of carrying on the management of rural affairs."

STATE-MONOPOLY: Manu[50] declares the ownership of the king of all things dug up from mines. The most lucrative industries which commanded the wide market abroad and which filled the royal treasury were kept under the state-control. Medhātithi, while explaining Manu,[51] illustrates the

46 Kau, Arthaśāstra II. Ch. XXXIV.
47 Kau, Arthaśāstra, II. Ch. XXXV.
48 Kāmasūtra - V. v. sutra 6.
49 J. Dept. Letters, XX. 1930. p. 108.
50 Manu, VIII. 39.
51 Manu, VIII. 399.

cases of saffron in Kāshmir, of fine cloth and wool in the East, horses in the west, precious stones and pearls in the south and elephants everywhere. Bühler notes that "saffron is still a royal monopoly in Kashmir."[52] Manu[53] says that "the king shall confiscate all the goods of him, who, out of greed, shall attempt to sell a property which is the king's monopoly."

The Periplus[54] records that the fishery at Colchi was worked by condemned criminals and "at this place (Argaru) and nowhere else are brought the pearls gathered on the coasts thereabouts." Pliny[55] also says that from the salt-range of Ormenus between the Indus and the Hydaspes, "a greater revenue accrues to the sovereigns of the country than they derive from gold and pearls."

Kauṭilya[56] also says that "the government shall keep as a state-monopoly both mining and commerce in minerals." The creation of these monopolies might have subjected traders to keen competition with the state and naturally narrowed down the scope of private enterprises. Salt was also another state-monopoly.[57]

The Kondamudi plates[58] of king Jayavarman (who has been placed about the end of the 3rd cent. A. D. or the beginning of the 4th cent. A. D. - See D. C. Sircar, S. S., p. 41) record the grant of the immunities (parihāras) to the Brāhmaṇas, one of which is 'alonakhadaka' by which the village was made free from being dug for salt. This shows that the salt-mines of the country were evidently the state-monopolies. On the evidence of the Pallava charters R. Gopalan (Hist. of the Pallavas of Kāñchï, p. 38) also remarks that during the period of the earlier Pallavas "the manufacture of salt

52 S.B.E., Vol. XXV. p. 323 n.
53 Manu, VIII. 399.
54 Peri., 59.
55 Pliny, XXXI. 7.
56 Kau, II. XII. 85.
57 Cf. Bühler in Ep. Ind, Vol. I, p. 2, note.
58 Ep. Ind., Vol. VI. p. 315. and also E.I., vi, 84.

and jaggery were royal monopolies and special license had to be obtained for private manufacture".

The superintendent of salt shall in time collect both the money rent and the quantity of the shares of salt due to the government and by the sale of salt he shall realise not only its value but also the premium of 5% (vyājīm), both in cash."[59] Adulteration of salt was severely penalised.[60]

It appears from Arthaśāstra[61] that the state goldsmith had the monopoly of manufacture of gold and silver articles, in the city and in the country-part, evidently for protecting the people from the notorious tendency of the artisans to rob and cheat their customers.[62] The Arthaśāstra refers also to a number of state-manufacturing concerns like spinning and weaving factories, factories for the manufacture of oil, clarified butter and sugar workshops for manufacture of forest-products and ores from mines.[63] The state-monopoly of coinage is also referred to in Kauṭilya[64] where the superintendent of the mint is said to have manufactured silver and copper coins (paṇas and māṣas), and as his subordinate officer the Examiner of coins is said to have regulated the circulation of coins required for general currency and those suitable for admission into the king's treasury.

Kauṭilya[65] also refers to the proceeds of sale of liquors manufactured by the state. Liquor was, of course, not the state-monopoly, the private persons in the city being allowed to manufacture liquor, subject to duty of 5% and to fees of indemnity and compensation.[66]

Two inscriptions, the Poona and Riddhapur plates of Prabhāvatīgupta (E. I, XV., p. 42, line, 17) and the Siwani and

59 Arthaśāstra, II. XII.. 84.
60 Kau., II. XII. 84 ; Yaj. II. 245.
61 Kau., Arthaśāstra, II. Ch. XIV.
62 Cf. Kau., ,, II. XIII.
63 Kau., II. Ch. XV, XVI. XXIII, etc.
64 Kau, II. 12.
65 ,, II. XXV.
66 Cf. U. N. Ghosal, Hindu Revenue System, p. 74.

Chammank copper plates of Pravarasena II (Fleet. p. 246, L. 29 and p. 238, L. 28) refer to the absolute monopoly of the state over the mines and the reserved forests in the Gupta period.

The Hirahadagaḷḷi plates also let us know that sugar was manufactured by the state. (E.I., vol. I., p. 6).

RULES FOR REGULATING MARITIME TRADE: Maritime trade of India with the countries overseas was an important source of revenue to the state and hence the state, specially under the Scythians of the West, brought the maritime trade under its subject control. The Periplus[67] bears a clear testimony to such a direct control of the king over imports and their proper distribution. It records not only the control of the state over overseas trade but also the fact that the state extended necessary protection to foreign ships at Broach against the extreme dangers of tidal bores by engaging native fishermen "in well-manned large boats" (44-46) and to cargoes from the hands of pirates.

Shipping was then one of the most important industries left in charge of the state. Kauṭilya[68] mentions the duties of the superintendent of ships. "Merchants shall pay the customary toll levied in port-towns. Passengers arriving on board the king's ship shall pay the requisite amount of sailing fees (yātrāvetaṇaṃ). The superintendent of ships must strictly observe the customs of commercial towns. Foreign merchants should be encouraged to land in port-towns with all facilities. Whenever a weather-beaten ship arrives at a port-town, he (superintendent of ships) shall show fatherly kindness to it."[69] Vessels carrying on merchandise spoiled by water may either be exempted from toll or may have their toll reduced to half. Ships touching at harbours on their way may be requested to pay toll. But pirate ships (hiṃsrūkā) must be destroyed.

67 Peri., 39 & 52.
68 Kau, II. XXVIII.
69 Kau, II. XXVIII. 126.

Kauṭilya has spoken of revenue to be paid by people using ships or boats, either royal or private. Royal ships or boats would be hired and private ones were liable to a duty. Evidently this tax was paid only as a return for the services of the superintendent of ships to the people using rivers or lakes or seas.[70]

ROAD-CESS: Manu has laid down laws for the protection of roads. He enjoins that "he who, except in a case of extreme need drops filth, on the king's high-road, shall pay two kārṣāpaṇas and immediately remove that filth."[71] He adds that "he who destroys a bridge, shall repair it and pay 500 paṇas.[72]

Kauṭilya also says that "it shall be the duty of the superintendent of passports to keep roads in good repair, to arrest thieves and to secure the safety of mercantile traffic."[73] He adds that "the king shall not only clear roads of traffic from the molestations of courtiers (vallabha), of workmen (kārmika), of robbers and of boundary guards, but also keep them from being destroyed by herds of cattle."[74] He has advised kings to "construct roads for traffic both by land and water and set up market-towns."[75] He has enumerated different roads in connection with the construction of forts.[76] His interest in roads is amply proved by his laws against the blocking of the roads,[77] as he has clearly stated the importance of roads of traffic.[78]

The king, as a maker or repairer of roads is entitled to

70 Cf. U. N. Ghoshal, Hindu Revenue System, pp. 76-7.
N.B. Strabo writes, "The admiral of the fleet lets out ships on hire for the transport both of passengers and merchandise." (Monohan - p. 144).

71 Manu, IX. 282.
72 Manu, IX. 285.
73 Kau., II. XXXIV. 141.
74 ,, II. 1. 49.
75 ,, II. 1. 47.
76 ,, II. IV. 54.
77 ,, III. X. 171.
78 ,, VII. XIV. 307.

to a road-cess (vartanī) which "the officer-in-charge of boundaries (antapāla) shall receive as" a 1¼ paṇa on each load of merchandise. He shall receive a paṇa on a single-hoofed animal, half a paṇa on each head of cattle and a quarter on a minor quadruped. He Shall also receive a māsha on a headload of merchandise."[79] The antapāla is evidently the 'warden of the marches' extending protection to caravans at the danger-zones of the borders. His duty is not only to realise road-cess but also to "make good whatever has been lost by the merchants" in the part of the country under his charge.[80]

REMISSION OF TOLLS: Kauṭilya[81] also frames some laws for remission of tolls. He says (I) that "commodities intended for marriages or taken by a bride from her parent's house to her husband's, or intended for presentation, or taken for the purpose of sacrificial performance, confinement of women, worship of gods, etc. shall be let off free of toll." This law indicates that bonafide cases of transfer of commodities from one place to another, where there was no motive of gaining profit, were exempted from taxation. Kauṭilya adds that all cases of lies and smuggling must be severely penalised. "Whatever causes harm or is useless to the country, shall be shut out and whatever is of immense good, as well as seeds not easily available, shall be let in free of tolls.[82]

Nārada[83] allows exemption of tolls on articles of śrotriyas for domestic use and not for trade (na tu vāṇijy akarmāṇi). Such exemption (parihāra) is also found in the Hathigumpha inscription of Khāravela (2nd cent. B. C.) where we read "Bāmhaṇānaṃ jātim parihāraṃ dadāti." The Hirahadagalli plate[84] of Śivaskandavarman and the Omgudu plate[85] of Vijayaskandavarman also mention such parihāras.

79 Kau, II. XXI. 111.
80 ,, ,, ,, ,,
81 ,, ,, ,, ,,
82 ,, ,, ,, 112.
83 Nārada, VI. 14.
84 E. I., Vol. I, p. 6.
85 E. I., ,, 15, p. 250.

LICENCE: Kauṭilya[86] introduced the principle of 'no shop with a licence.' He says that "licence or permission (nisṛshṭi) shall be enjoined either in word or deed; accordingly it is styled verbal order or writ of licence." This shows that government issued licence, verbal or written, to persons who applied to get permission from the king for collecting grains or other merchandise as middlemen. Kauṭilya makes a clear statement of the fact that "authorised persons alone shall collect grains and other merchandise. Collection of such things without permission shall be confiscated by the superintendent of commerce."[87] This law checked speculation, competition and hoarding. The state regulated buying and selling with an eye to the good of the people. "Whenever there is an excessive supply of merchandise, the superintendent shall centralise its sale and prohibit the sale of similar merchandise elsewhere before the centralised supply is disposed of. Favourably disposed towards the people, shall merchants sell this centralised supply for daily wages."[88] This reminds us of the system of control existing in our own days and of the government warehouses for keeping centralised goods under government control and also of clearance sale under-state-permit.[89]

PROFITS AND PRICES: As regards state regulation of prices and profits the Jātakas also refer to the Agghakāraka who valued everything on behalf of the king. The Jātaka[90] shows that there were no fixed prices in its time. The exchange between producers and consumers was a free bargain. Competition, adulteration and knavery (kūtakāri) were not unknown in those days.[91] Haggling over prices was not an

86 Kau, Bk. II., Ch. X. 74.

87 ,, , Bk. IV., Ch. II. 206. "Tena dhānya-paṇyanichayāṃschānujnātāḥ Kuryuḥ. Anyathā nichitameṣām paṇyādhyakṣo gṛhnīyāt."

88 Kau, Bk. IV, Ch. II. 206.

89 Cf. Kauṭilya, by Narayan Chandra Banerjee, p. 195.

90 Jāt, I. p. 98.

91 Jāt, III. pp. 282 ff.

uncommon feature of the period.[92] Gradually prices were fixed in terms of money and barter was replaced by the use of natural currency. The Jātakas mention the prices of common things like a pair of oxen as 24 kahāpaṇas,[93] of a fine dog as one kahāpaṇa[94] of a decent ass as 8 kahāpaṇas[95] and of a fish as 7māṣakas[96] (satta māsā).

Manu[97] prescribes the first or the middlemost amercement as the fine for that man who behaves dishonestly to honest customers or cheats in his prices.

The laws of Kauṭilya provide for the regulation of both the prices and profits of merchants. He says that "the superintendent of commerce shall fix a profit of 5% over and above the fixed price of local commodities and 10% on foreign produce." Merchants who enhance the price or realise profit even to the extent of half a paṇa more than the above in the sale or purchase of commodities shall be punished with a fine.[98] As a matter of principle Kauṭilya took "traders, artisans, musicians" and others as "thieves in effect, though not in name,"[99] and said that they must be restrained from oppression on the country. Hence he has laid down rules strictly for the adoption of all measures of protection against the merchants.[100] The sale of commodities was thoroughly controlled by the superintendent of commerce, who must be always alert to prevent all sorts of deception and all conspiracies on the part of merchants. Any conspiracy to prevent the sale of merchandise or to sell or purchase com-

92 Jāt, I. pp. 111 ff.; Jat. II. pp. 222. 289. 424 ff; VI. p. 113-G. 479. (agghena agghṁ kayaṁ hāpayanti).

93 Jāt, II. pp. 305-6.

94 Jat, II. p. 247.

95 ,, VI. p. 343.

96 ,, II. pp. 424 & 425 - G. 112.

97 Manu, IX. 287.

98 Kau, Bk. IV. Ch. II. 206.

99 ,, IV. I. 204.

100 ,, Ch. II.

modities at higher prices was nipped in the bud by heavy fine of 100,0 paṇas.[101]

"The superintendent shall, on consideration of the outlay, the quantity manufactured, the amount of toll, the interest on outlay, hire and other kinds of accessory expenses, fix the price of such" commodities with due regard to their having been manufactured long ago or imported from a distant country. Manu[102] and Yajñavalkya[103] lay down laws for the regulation of the prices or profits in a similar manner. Manu[104] further says that "at the end of each fifth day or each fortnight, the king, in the presence of appraisers of prices and in consideration of their stock in the market, shall lay down the prices of commodities."

The proper prices and profits were maintained by the strict regulations of Kauṭilya that there must be no sale except in markets. Nothing could be sold in the place of its production ("Jātibhūmiṣu paṇyātāmavikrayaḥ). Things must be properly examined, sealed, and sent to the market where tolls must be paid before they are sold according to the price fixed by the state. The law of demand and supply in the determination of prices was definitely known as we find in the Arthaśāstra how the government kept vigilant watch on the fluctuation of prices owing to abnormality in demand and supply and how the superintendent of commerce played the part of the Controller of supplies department of our present days controlling the sale through one agent and forbidding the sale of similar merchandise elsewhere before the centralised supply is disposed of. [105] (paṇyavāhulyāt paṇyādhyakṣaḥ sarvapanyānyekamukhāni vikrīnīyāt. Teṣvavikrīteṣu nānye vikrīnīran.-) Thus this system checked the policy of cornering on the port of merchants. The superintendent of commerce "shall also ascertain the time suitable for the distribution.

101 Kau, Arthaśāstra. Bk. IV. II, 205 ; Yaj, II, 249-250.
102 Manu, VIII, 401.
103 Yāj., II, 251-253.
104 Manu, VIII. 402.
105 Kau, Arthaśāstra, p. 205-207, IV, II.

centralisation, and purchchase of sale" of commodities.[106] He may allow pedlars to sell the merchandise of a king at a fixed price in many markets. It is interesting to note that when the price is raised owing to rivalry among buyers, Kauṭilya says that the "enhanced amount of the price together with the toll shall be paid into the king's treasury,"[107] or "the king shall receive twice the amount of toll on it."[108] Kauṭilya has also laid down laws for the regulation of smuggling by "forfeiting the smuggled quantity" and by heavy fine by the king[109]

The Bṛhatsaṃhitā mentions the cases of "extra-ordinary rise or fall in the prices of food-grains", sometimes owing to "some sort of trouble through water, fire or wind". ("jala-dahana - pavana - bhayakṛt dhānyārghakṣaya - vivṛdhyai" - VII.1; also XVII.25; XXIV. 33 and XLI. 11 - "dravyānām mahārghatā durlabhatvaṃ cha").

WEIGHTS AND MEASURES: The Jātakas refer to some notable weights and measures- weights like 'ammana' (a measure of about 4 bushels) in Jātaka (V. p. 297) and Milinda-pañha (IV. 1. 19); nali in Jātaka (IV. p. 67). and paṭṭha in J. V. p. 297 for weighing grains and catubhaga and accharaṁ (Jat, V. p. 385) for liquids. Aṅguli, Vidaṭṭhi, Yaṭṭhi etc. are also mentioned as measures of distance. (Jāt, VI. pp. 339-341.).

Manu lays down rules for the regulation of weights and measures and ordains the king to examine them at the end of each six months.[110]

Kauṭilya introduces us to various balances and measures of capacity[111] (āyamāni, parimāni and samavṛtta). He mentions that "the superintendent of weights and measures shall have the same manufactured" and he "shall charge 4 māshas for stamping weights and measures" of private traders and he

106 Kau. Arthaśāstra Bk. Ch, XVI, 98.
107 " " Bk. II. Ch. XXI, 110.
108 " " " " 110.
109 " " " " 111.
110 Manu, VIII, 403.
111 Kau., II., XIX.

must impose a fine of 27¼ paṇas for using unstamped weights and measures. All transactions must be made with standardised weights and measures. The superintendent of commerce should also "supervise weights and measures with a view to prevent deception.'[112] Kauṭilya has condoned a very slight difference in weights and measures as 'no offence'; but any difference of such a magnitude as amounting to deception, willfully made was strictly forbidden and penalised. Yājñavalkya[113] has also enjoined fines for such deception in a later period.

Varāhamihira portrays a fine picture of a dealer, "seated in a shop that he has opened in a market or on the way to market, who holds a balance in one hand and is skilled in weighing and measuring, and who has got articles in his hand to be weighed and measured and is thinking that such would be their price".

("Vīthyamtarāpaṇagataḥ puruṣastulāvānunmāna-mānakuśalah pratimānahastaḥ, bhāṇḍaṃ vichintayati, tasya cha mülyametadrūpaṃ" - ch. XXVII. 19).

ADULTERATION: It was severely punished. Manu[114] enjoins that one commodity mixed with another must not be sold (as pure), nor a bad one (as good), nor less (than the proper quantity or weight)." He has mentioned the first amercement as the fine for adulterating unadulterated commodities.[115] Yājñavalkya[116] also prescribes penalty of 16 paṇas on traders making adulteration in medicine, oil, salt, perfumes, rice and molasses etc. ("bheṣaja-sneha-lavaṇa-gandha-dhānya-guḍādiṣu, paṇyeṣu prakṣipaṇ hīnaṃ paṇyāṇ dāpyastu ṣoḍaśa.")

He lays down the law of punishment of eightfold the amount of sale in cases of adulteration in earthen materials,

112 Kau., IV, II. 204.
113 Yāj.. II. 244-46.
114 Manu, VIII. 203.
115 ,, IX. 286.
116 Yāj.. II. 245.

hides, threads etc."[117] When a trader sells adulterated things or deceitful mixtures, ... he shall not only be punished with a fine of 54 paṇas but also be compelled to make good the loss."[118] Kauṭilya recommends punishment for adulteration of grains, oils, alkalis, salts, scents and medicinal articles with similar articles of no quality with a fine of 12 paṇas."[119] He says that "adulteration of salt should be punished with the highest amercement."[120]

RESCISSION OF PURCHASE AND SALE: Manu[121] says that "he, who, having purchased a sold article repents his sale or purchase, must return it (to the seller or purchaser) within 10 days of the sale or bargain." But "after the expiry of 10 days such an article must not be given or taken;" if done otherwise, "the king shall punish the giver or taker, with a fine of 600 paṇas.[122] But Yājñavalkya[123] has extended time-limit for the examination of seeds, iron, oxen, gems, female slaves, cows and male slaves for 10, 1, 5 and 7 days, a month, three days and a fortnight respectively. He means to say that if the purchaser feels 'repentant' after examining the seeds etc., he should return them within the prescribed period and never after its expiry. Manu's injunction of returning within 10 days, as mentioned above, is interpreted by the Mitākṣara to refer to land, houses, carriages etc. and not to iron etc.

Vijñāneśvara[124] adds that this rule holds good only in cases of purchases done without previous examination. If the purchase is done after examination and with such an agreement as not to return, the purchased thing should never be re-

117 Yāj, VIII. 240.
118 Kau, Bk. IV, Ch. II, 205.
119 Kau, Arthaśāstra. IV. II. 206.
120 ,, ,, II. Ch. XII. 84.
121 Manu., VIII. 222.
122 ,, VIII. 223.
123 Yāj., II. 177.
124 Vijñāneśvara on Yājñavalkya, II. 177.

turned to the seller. Kauṭilya[125] provides that "time for rescission of a sale is one night for merchants, three nights for a cultivator; 5 nights for herdsmen; and with regard to the sale or barter of previous things and articles of mixed quantities (vivṛttivikraye) 7 nights." Nārada[126] says that the purchaser should minutely see things before buying and consult with others to find out the defects, if any, and if he buys after close scrutiny and cool calculation, he can not return them to the vendor.

Next comes the question of 'non-delivery of a thing after it is sold for a price, ('Vikrīyāsaṃpradānaṃ). Kauṭilya says that "a merchant, refusing to give his merchandise that he has sold, shall be punished with a fine of 12 paṇas, unless the merchandise is naturally bad or is dangerous or is intolerable.[127] He has defined the terms, bad, dangerous and intolerable. That which has natural defects is bad; that which is liable to be confiscated by the king, or is subject to decay-by thieves, fire or floods, is dangerous and that which is devoid of all good qualities or is manufactured by the diseased, is intolerable. He further says that "a person who tries to return an article, not bad or dangerous or intolerable, must be punished with a fine of 12 paṇas. Yājñavalkya[128] says that if a man sells property and does not deliver it to the purchaser, he should be made to deliver it to the purchaser together with profits (the difference between the time of sale and delivery) and in case of movable ones like cows etc., together with the value of things derived from them (i.e., milk in the case of a cow). Nārada also says in this connection "sthāvarasya kshayaṃ dāpyo jaṃgamasya kriyāphalaṁ," i.e., the immovable things must be returned along with what is enjoyed by the seller and the movable ones with the fruits thereof (as milk of cows). Nārada adds that if the things, sold but not delivered over to buyers, are lost, burnt or dama-

125 Kau., Arthaśāstra, Bk. III, Ch. XV.
126 Nar.. XII. 4.
127 Kau. Arthaśāstra, Bk. III, Ch. XV, 187.
128 Yāj., II. 254.

ged, the seller alone will be the looser. Yājñavalkya[129] provides that" if the first purchaser (after having paid the price) does not take delivery of the article sold, it should be sold again (by the seller). Any loss (sustained in this transaction), because it is occasioned by the negligence of the first purchaser, must be his." But any deterioration caused to the commodity by a calamity, divine or regal, must be compensated by the seller, if he does not deliver it (to the purchaser) when asked to do so." (256). These laws show clearly how culprits must have been found out and penalised for their negligence. Sale means transfer of ownership and if any thing sold remains undelivered, the question rises who is to blame and he alone who is negligent, must be punished. Yājñavalkya[130] again enjoins that "if one resells one article (to another), sold (to one), or a defective article for a sound one, he should be penalised with double the value (of the article concerned)." But Nārada says that this law of Yājñavalkya[131] is restricted to those cases only in which prices have been paid to the seller. But where prices remain still unpaid and where sale is merely verbal this sort of re-sale may be permissible, if the seller is not bound by any agreement.

SALE WITHOUT OWNERSHIP: Sale without ownership has been highly condemned as an act of crime by all lawgivers. Manu[132] says that "a gift or sale, made by anybody else but the owner, must be considered as null and void, according to the rule in judicial proceedings."

Nārada says that if a thing deposited, or lost or stolen is sold secretly by one who is not the owner, it is a case of sale without ownership. If the purchaser purchases a thing lost or stolen, he must get the seller arrested by the police and if time or place does not permit this action, the owner himself must catch hold of the offender and bring him before the

129 " II. 255.
130 Yāj, II. 257.
131 „ II. 257.
132 Manu, VIII. 199.

judges."[133] Yājñavalkya[134] also holds later on the same view and adds (270) that the purchaser is proved innocent simply on producing the seller and the real owner gets back the thing, the king gets fine and the purchaser, his own price paid for it from the seller. Kauṭilya says that "the seller, if unable to produce another seller who sold it to him, shall not only pay the value of the property but also be liable to the punishment for theft."[135]

An act of stealing is a crime and to encourage it is also no less an offence. One who takes by force the lost or stolen article from the thief without bringing it to the notice of the king, must be punished with a fine of 96 paṇas. Gautama says that the king should protect the lost or stolen article for one year. The real owner may take it back within one year but after one year the king shall take it. Kauṭilya is more rigorous on this point and prescribes a period of only three fortnights for return of the article to the real owner. Manu's extension of time-limit for 3 years refers to articles of learned brahmins only; besides, he allows the king to take 1/6th, 1/10th and 1/12th of the value, as tax, of the articles lost or stolen, on the 3rd, 2nd and 1st year. But Kauṭilya[136] provides that one who proves one's title to a lost or stolen biped (a slave), shall pay 5 paṇas towards ransom before taking possession of it. Likewise the ransom for a single-hoofed animal shall be 4 paṇas; for a cow or a buffalo, 2 paṇas and for minor quadrupeds, $\frac{1}{4}$th of a paṇa.

Thus sale without ownership is illegal and such a seller must not be allowed to give evidence and is taken to be a thief (Manu).

Breach of Contract and Violation of Conventions: Manu[137] speaks of such breach of conventions and says that "him, who, having promised on oath to abide by the rules

133 Kau., III. Ch. XVI. 189.
134 Yāj., 269.
135 Cf. Manu, 8. 199; Yāj, 2. 169-170.
136 Kau. Bk. III. Ch. XVI. 190.
137 Manu, VIII. 218-219.

of the guild or assembly of his village or country, breaks that promise (i.e., transgresses the rules) out of greed, the king should banish from the country." The term, 'samaya' has been used in the sense of 'conventions' from the period of Āpastamba.[138] Medhātithi while explaining the injunction of Manu[139] says that 'samaya' is the 'acceptance of a certain convention arrived at by many' and it is binding on all members of a group or guild. Yājñavalkya[149] holds that the king should carefully protect the conventions which do not contradict the canons of the Śruti and Smṛti. This shows that the conventions must be subservient to the canons of the scriptures. Yājñavalkya[141] adds that the conventions of guilds, naigamas (believers in vedas), heretics śrenīs, pūgas, gaṇas should be enforced by the king and their traditional duties should be preserved. Manu[142] says that it is the duty of the king to enquire into the laws of a guild and settle its peculiar law. He[143] adds that "if a man belonging to a corporation breaks any agreement through avarice, the king shall banish him from his realm. Manu[144] provides a fine of 6 nishkas of 4 suvarṇas each for him who disregards or violates the conventions.

Yājñavalkya[145] speaks of a committee of pious, pure and not-covetous members who were judges of all affairs (kāryachintakāh) and who must have been regarded by each and all, because whatever they said was for the good of the group. This indicates the solidarity of the entire body, purity and honesty of each member and the spirit of co-operation and common interest among all. The committee followed the golden principle of "each for all."

138 Āpa. Dhs, I. 1. I. 2. and II. 4. 8. 13.
139 Manu, 219, VIII.
140 Yāj., II. 186.
141 Yāj, II. 191.
142 Manu, VIII. 41.
143 „ „ 219.
144 „ „ 220.
145 Yāj, II. 191.

Like Manu (VIII. 219), Yājñavalkya also prescribes forfeiture of all property and banishment for the person who misappropriates the property of the guild or who violates the conventions made by the corporation or by the king.[146] Manu's prescription of different penalties in VIII, 219 and 220 has been interpreted by the Mitākṣarā as depending on the nature of the offence and capacity of the offender ('jātiśaktyādyapekṣayā') [147]

RETAIL SALE: The rich seṭṭhis of the Jātakas may be taken as wholesale dealers, a class of middlemen between the producer and the trader whom the economists call the entrepreneur. The Cullaka-seṭṭhi Jātaka[148] shows how they purchased wholesale, the ship's entire cargo only to sell it off to various traders and thereby snatch a heavy profit.

Kauṭilya frames laws for the regulation of retail sale as well. He says: "Retail dealers, selling the merchandise of others at prices prevailing at particular localities and times shall hand over to the wholesale dealers as much of the sale proceeds and profits as is realised by them. If owing to distance in time or place, there occurs any fall in the value of the merchandise, the retail dealers shall pay the value and profit at that rate which obtained when they received the merchandise."[149] This shows the relation between retail and wholesale dealers. There must have been a closer understanding and spirit of co-operation between them. Each of them moved in such a way as not to cause loss to the other. The wholesale dealers distributed the wares to the retail-dealers on a commission or share of profit. The retail-dealers did never play the role of the dealer of modern days, deriving profit according to the circumstances favouring them. They were rather agents or salesmen of wholesale dealers, possibly of so many ones at the same time. The result was, the people procured wares at regulated prices from retail markets.

146 Yāj., II. 187.
147 Com. on Yāj. II. 187.
148 Jāt, I., pp. 120 ff.
149 Kau., Bk. III. Ch. 12. 179.

CHAPTER VIII.

Corporate Activities

The spirit of co-operation is a social instinct in man. Viscount Bryce[1] says, "in primitive societies the forces other than fear have been extremely powerful; the reverence for ancient lineage, the instinctive deference to any person of marked gifts ..... and the associative tendency which unites the members of a group so closely together that the practice of joint action supersedes individual choice." A guild was, therefore, the natural outcome of a social instinct to form a particular unit based upon common purpose.

It expressed itself in ancient India in her economic life. We come across the term 'gaṇaśaḥ' in Bṛhadāraṇyaka Upaniṣad[2] by which Śaṅkara meant 'the Vaiśyas' because it was by co-operation and not by individual enterprises that the Vaiśyas acquired wealth. The earliest reference to corporations of merchants is found in the Ṛgveda[3] where the gods were asked to attack the Paṇis. Ludwig[4] thinks that the Paṇis were aboriginal traders who went out in caravans and who were ready to fight and resist the attack of Aryan invaders. Paṇi is derived from the root 'paṇ' meaning 'barter' and hence it signifies 'a merchant.' Dr. R. K. Mukherjee[5] remarks - "In all the references to Vedic literature the manner of allusion to the head of the guild and his high social position and preeminent influence seems to support the conclusion expressed by some Vedic scholars that the guild was then already a known and familiar institution." Fick[6] also traces the exis-

1 Studies in History of Jurisprudence, II. p. 21.
2 Bṛ. Upa., 1.8.12, "('gaṇaṃ gaṇaṃ ākhyāyante .. ... gaṇaprāya hi Viśaḥ."
3 Ṛgv, V. 1, p. 471.
4 Der Ṛgveda 3. 213-215.
5 Dr. Mukherjee, Local Self Government, p. 43.
6 Fick's Soc. Org., tr. by S. K. Moitra, p. 267.

tence of trade associations for economic reasons to an early period of Indian culture and finds them better mentioned in the epics and lawbooks. The period of the Gṛhyasūtras witnessed the further extension of trade as we find in them the Vaiśyas performing the rite of 'paṇyasiddhi' or success in trade. Mr. S. P. Niyogi notes that "from the point of view of economic history the period of Gṛhyasūtra was the age of guild enterprise and marked the transition from individual enterprise to that corporate activity[7]"

Pāṇini's words, e.g., Gaṇa, Pūga, Vrāta and Saṅgha (V.3) show the rise of guilds, closely connected with the growth of industry. His rules like "Grāmaḥ Śilpini" (VI. 2. 62) and "Grāmakauṭābhyāṃcha Takṣṇaḥ" (V. 4. 95) testify to the existence of different craftsmen, carpenters and smiths in villages. With the development of commerce towns grew up with many guilds of traders and of craftsmen.

The Rāmāyaṇa[8] uses the term 'Naigama' in the sense of a society of traders and craftsmen. The Mahābhārata uses this term to mean a guild of merchants. Buddhist literature abounds in references to trade-guilds. Buddhism, like Jainism, is the outcome of a movement, headed by Kshattriya princes, against the order of Brahmanism and hence gives a preferential position to Kshattriyas and unrestricted freedom to the Vaiśyas. So Hopkins remarks, "on the one hand, early Buddhistic literature from 350 B. C. onwards teems with references to the guilds and speaks of the heads of guilds as of the highest social position, while the seat of guild power today is still found among the Jains." (India, old and new). The life of the Lord Buddha is full of references to guilds. The Chullavagga[9] refers to the setthis of Rajgir; while the Mahāvagga[10] refers to those of Benares and Rajgir. The Valāhassa Jātaka relates the story of 500 merchants with a chief at their

7 Mod. Review, 1953, June, Vol. 93, p. 480.
8 Rāmā., Ayo., XIV. 40 and 52.
9 Chulla v. VI. 4. 1.
10 Mahā v. VIII. I. 16 ff.

head, who chartered a vessel for trading in Ceylon.[11] We read also in the Suppara Jātaka[12] that 700 merchants got ready a ship and engaged a skipper. The Guṭṭila Jātaka[13] refers to certain traders of Benares who made a journey to Ujjain for trade. Anāthapiṇḍika, the famous merchant, who was the husband of the sister of the Rājagaha seṭṭhi, was called Mahā-setthi. The Jarudapāna Jātaka[14] refers to a large caravan of traders at Śrāvastī and Benares united under a chief, Jeṭṭhaka with cartloads of wares. The Alīnachittajātaka (156) mentions a guild of weavers who lived near Benares. The Pacchuppanavatthu of the Uraga Jātaka gives some indications of a more developed guildhood; a 'guild-quarrel' between 2 ministers of a king and at the head of guilds (senipamukha) is also worthy of mention[15]. 18 trade-guilds are frequently mentioned in the Jātakas. The above references prove that traders undertook commercial activities in an organised body. Dr. Fick observes:— "Local division of different kinds of work, hereditary character of branches of profession and the existence of an elder seem to me to indicate clearly an organisation of handicraft which can be compared in many respects with our corporations in middle ages."[16] Rhys Davids[17] has mentioned the guilds of workers in wood, stone, metal, leather and ivory and of clayers, jewellers, fishermen, butchers, barbers and shampooers, sailors and basketmakers.

The term 'śreṣṭhī' is very often found in the Jātaka as the "official representative of the commercial community." "The title of seṭṭhi (chief), which is so often met with and without much justification, rendered by 'treasurer,' may possibly imply hardship over some class of industry or trading.[18]

11 Jāt., II. p. 127.
12 " No. 463; IV. 136.
13 " No. 243.; II. 248.
14 Jāt., No. 256; II. 294 ff.
15 Cf. Fick, p. 275.
16 Social Organisation in N. E. India. by Fick, tras, by S. K, Moitra, p. 284.
17 Rhys Davids, (in his Buddhist India), p. 90 ff.
18 C. H. I., Vol. I, p. 185.

Rhys Davids[19] translates 'mahāseṭṭhi' as "Lord High treasurer" and notes that disputes between one guild and another were in the jurisdiction of the Mahāseṭṭhi, the Lord High treasurer, who acted as a sort of chief Alderman over the aldermen of guilds." The terms 'Śreṇī' Pūga, Kula and Gaṇa are also used in the sense of trade-guilds or of craft-guilds. R. L. Mehta[20] has marked the nice distinction between the organisations of craftsmen (seṛiyo) and of merchants (vānija). The former, were more or less permanent, while the latter more temporary.

Manu uses the term 'Śreṇi' which has been interpreted in three different senses; first, as a company of 'merchants, bankers and artisans;' second, as "an association of merchants and husbandmen by Medhātithi" and third, "an association of merchants and actors." Nārada uses the term 'Śrenī' in the sense of "an assemblage of eminent merchants"; (1.7); and also of "a company of traders and others" (X.2).

Kauṭilya[21] uses the terms "Sambhūya Samutthātāraḥ," "Saṃghabhūtāḥ" and "Śrenī" as "guilds of workmen and of those who carry on any co-operative work. He also refers to a class of Kshattriya guilds which lived upon both trade and war (Kāmboja - Surāṣṭra - Kṣattriya-Śreṇyādayo Vārtā-śastropajībinaḥ[22]). He refers here to a class of guilds which followed some crafts and carried on military profession at one and the same time.

Hence, though Mrs. Rhys. Davids[23] has denied the existence of any guildorganisation in ancient India, we may assume in the light of the evidences given above that guilds had taken a firm hold on Indian soil, at least in the period of our investigation.

Caste-system helped much towards division of labour and

19 Rhys Davids, Buddhist India, p. 97.
20 Pre-Buddhist India, p. 216.
21 Kau., III. XIV, p. 185.
22 " XI. 1. 378.
23 Rhys Davids, J.R.A.S., 1901, p. 869.

led to differentiation of occupations and gradually resulted in the specialisation of industries. Extension and complexities in trade and industries certainly gave rise to the formation of associations for mutual assistance. It is easy to realise how or why guilds came into being.

Traders had to pass through insecure roads of long distances and hence they had to unite themselves only to meet various perils. Hopkins says that "the development of commercial interests was sufficient ultimately to cause the establishment of a sort of trade-unions."

Dr. R. C. Majumdar has dealt with 5 inscriptions in his "Corporate life in Ancient India"-p. 8ff.

(1) An inscription in a cave at Nasik[24] dated in the year 42 (120 A. D.) records the gift of 3000 kārshāpaṇas by Ushavadāta, son-in-law of the Śaka-chief Nahapāna, meant for the benefit of the Buddhist monks living in the cave. The entire amount was invested in the guilds of Govardhana in the following manner: "2000 in a weavers' guild, the rate of interest being 1% per month; 1000 in another weavers' guild at the rate of $\frac{3}{4}$ percent per month." It is clearly stated that these Kahāpaṇas are not to be repaid, their interest only to be enjoyed. We know also that this has been "proclaimed and registered at the town's hall, at the record office, according to custom."[25]

(2) Another inscription at Nasik[26] dated in the ninth year of king Īśvarasena, who ruled in the 3rd cent. A. D. records the investment of a similar endowment with the guilds of Govardhana as follows:—

"In the hands of the guilds of Kularikas (probably potters) 1,000 kārshāpaṇas; of the guild of Odayaṇtrikas (probably workers fabricating hydraulic engines, water-clocks etc.) 2,000." The last portion of the inscription is mutilated. But it shows

24 Lüd., No. 1133.
25 Ep. Ind., Vol. VIII, pp. 82-86.
26 Lüd., No. 1137.

that the amount was invested with the guild of oil-millers and the sum of 500 kārshāpaṇas with another guild.

(3) An inscription of Junar[27] records the investment of two fields with the guilds at Koṇāchika for planting Karañja trees and banyan trees.

(4) Another inscription at Junar (1165) records the investment of money with the guild of bamboo-workers and the guild of braziers.

(5) A third inscription at Junar[28] records the gift of a cave and a cistern by the guild of corn-dealers.

The five inscriptions mentioned above show clearly the functions of ancient guilds as modern banks. They received deposits of public money on regular interest and lent out money to the people. The rate of interest varied between 12 and 9 percent. Just as now, these guild-banks spread all over the country and rendered services to the people at large. They arrested confidence of the people enough to be trusted with investments and hence we may presume that they must have had honest and fair dealing. They received money in cash and also in kind. (No. 3). They were responsible to the municipality of the town for the satisfactory discharge of their duties as trustees of public money (No. 1).

The Guildbanks had established such reputation that even the kings like Chandragupta II and his son and successor Kumāragupta I permanently deposited dīnāras with guilds in different instalments for the maintenance of two almshouses. (Fleet. p. 38 and 40).

The Indore C. P. of Skandagupta (Fleet. p. 68) refers to similar functioning of guilds as banks. It records Devavishṇu's gifts of an endowment, out of the interest of which a lamp should be perpetually maintained in the temple of the Sun. The amout was permanently deposited with the guild of oil-men of Indrapura; who had apparently invested this sum in

27 Lüd., " 1162.
28 Lüd., No. 1180.

their own business or lent money to others only to gain interest which provided two palas of oil for the lamp, probably every day .

This inscription, like that of Mandasor points also to the mobile character and inherent strength of guilds ; because the gift is made perpetual, "as long as it continues in complete unity, (even) in moving away from this settlement". The guilds must have been thoroughly organised and characterised by honesty and fair dealing so as to create confidence amongst the people. The internal cohesion and corporate spirit of the guilds are proved by their longevity after the death or change of members and even after the change of place which did not affect any-way their credit or liabilities to the depositors.

We have another evidence of guilds serving as treasury offices. The Lakṣmeśwar inscription of Vikramāditya of the western Chālukya family of Bādāmi tells us ,that the guild of braziers was authorised by the state to realise taxes from the people. (Barnett, E. I, XIV, p. 190).

Besides these, let us enquire into the other inscriptions of the Kushāna period showing the rise of other guilds :—

(1) Guilds of architects :—

The Taxila Casket inscription[29] of the year 1 of Kaniṣka mentions a religious gift by dāsa Agissala- a Nava-karmika. The sense of the term 'Navakarmika' admits of much controversy. Spooner means by this "an overseer of works," whereas Prof. Stein Konow prefers "an architect." "Navaka mikehi" is also found in the Nagarjunikonda inscription[30] in the sense of "the superintendents of works." The Hida inscription[31] records the investment of a relic by Saṅghamitra, a

29 *A.S.I.R.*, 1908-9, pp. 38-59.

30 Ep. Ind, Vol. XX, p. 23.

In Singhalese social organisations the workers in different metals, goldsmiths, silversmiths etc. formed a class known as 'Navandanno." (Cf. Ind. Culture. Vol. XV, p. 232).

31 Kharoṣṭhī inscriptions, No. LXXXII.

navakarmika. Rohinimita, a navakarmika is also heard of in another older (Khoroṣṭhī) Taxila copper-plate inscription of Patika. Some think that the 'navakarmika' of the relic casket was an artificer, a coppersmith who designed the casket and not the architect. But all the records, mentioned above, taken together help us to infer that there was a craft-guild of the Navakarmikas who built Vihāras, temples etc. This is confirmed by the term 'Navakarmika' in the Manikiāla inscription[32] which mentions 'Burita' as the repairing architect (Vihara-Karavhena).

(2) Guild of blacksmiths:—

The Mathurā inscriptions record the names of so many blacksmiths. The inscription (Lüd. 29) mentions "the dedication by Mittra, first wife of Haggudeva, daughter-in-law of the iron-monger (lóhavāṇiya) vādhara .... . daughter of the Khoṭṭamitta the manikāra." The inscription (No. 53) records "the dedication of the image by the worker in metal (lóhikākāra), Sūra, the member of the committee (goṭṭika). Another 'lohikakāruka' Gova, son of Siha is also heard of in the inscription (Lüd, No. 54) to have dedicated an image of Sarasvatī. The blacksmith (Kāmāra) Nāda of Kalyana is recorded to have given a path in the Kānheri inscription.[33] Thus the blacksmiths are said to have prospered and formed crafts-guilds as evidenced by the term 'goṭṭika,' mentioned above. The Jātaka [34] also refers to the guild of blacksmiths. They were regarded as standing on a footing of equality with carpenters, masons and painters. The Mathurā inscription,[35] as shown above, confirms this equality in status by marriage between a blacksmith and a jeweller. Jewellers' guilds:—

A jeweller (manikāra) Nāgapālita of Sūrparaka is mentioned in the Kānheri inscription.[36] Pliny[37] speaks of reputa-

32 Kharoṣṭhi Ins. No. LXXVI.
33 Lüd. No. 1032.
34 Jāt, VI. 427.
35 Lüd, No. 29.
36 " No. 1005.
37 Pliny, Bk. 37.

tion of Indian gems in the west. Hence we may naturally expect that the jewellers had a good business in the 1st cent. A. D. A jeweller's daughter has already been alluded to to have married a blacksmith's son, showing thereby that caste did not interfere in the selection of craft and that all craftsmen had almost equal prestige in the eye of the society. Apart from a jeweller who worked in jewels and diamonds, we hear of goldsmiths and their guilds. Utara, the goldsmith (Sovaḥ-ika) is mentioned in an inscription on a copying stone.[38] Samidata, the goldsmith of Kalyana is recorded to have made a gift of a cistern, together with the order (sagha) in Lüd. No. 986. The inscription[39] also speaks of another goldsmith of Kalyana, named Saghaka. The goldsmith[40] named Deva is also heard of. The Mathurā inscription[41] also speaks of a goldsmith Nāṁdighósha. Thus we may easily infer that goldsmiths attained a good position in the economic life of the period concerned.

PERFUMERS: We learn from the Mathurā inscription[42] of Jitamitrā, mother of the perfumer (gandhika) whose name is unfortunately lost to us. The Mathurā inscription speaks of another perfumer, Kumārabhati. Jinadāsi, wife of the perfumer 'vya.. cha' is also recorded to have dedicated an image in the Mathura inscription.[44] The Karle inscription[45] mentions the gift of a cave-door by the perfumer Siṁhadata from Dhenukākata. The family of the perfumer Mitradeva of Patiṭhāna is said to have made a gift of a pillar in the Pitalkhóra inscription[46] The perfumers are also referred to in the Jātakas, I. 320 and II. 197 as supplying toilet requisites like sandalwood, camphor-

38 Ep. Ind, Vol. X, XII.
39 Lüd, No. 1177.
40 Ep. Ind, Vol. II, No. XXII. p. 205.
41 Lüd, No. 95.
42 Lüd, No. 37.
43 " 39.
44 " 68.
45 " 1090.
46 " 1187.

oil and rose-water etc. Thus we may easily infer that they had also formed a sound group.

BARBERS' GUILD: The guild of barbers is mentioned in the Jātaka along with shampooers.[47] In Pali Suttavibhaṅga,[48] their profession is called "hinasippa." The term 'Rājanāpita' (chief of barbers) is found in the only inscription[49] in very bold letters (2″ X 3″) in size, engraved on a slab which might have served the purpose of a signboard showing perhaps his house or shop.

SABHITTAKARA: The inscription of Mathura[50] speaks of 'Samitikar Śreṇī, which, according to M. Williams,[51] means "wheat-flour guild". Wheat must have been sent to this guild for manufacture into flour in exchange of some nominal fee.

RAYAGINIYE: The Mathurā inscription[52] records a dedication by Rayagini, who is, according to Buhler, the name of the donor. But Lüders translates the term as "the wife of a dyer."[53] The Jātaka mentions, however, a guild of dyers.[54] Hence this inscription may be taken to suggest the guild of 'rajaka, i.e., washermen or dyers.

The guilds of the inscriptions mentioned above were so many craft-guilds, now let us enquire into the inscriptions of the same period throwing light on merchant-guilds. We have enough of inscriptions mentioning the names of merchants, as shown in Luders' list. No. 269, 320, 987, 995, 998, 1000, 1001, 1024, 1062, 1065, 1066, 1127, 1139, 1213, 1229 and 1289. The Mathurā inscription (Lud. No. 30) is the only record wherein we come across Dharmasómā, wife of a caravan-leader (Sārthavāhinī). The name of the caravan-leader is not mentioned, perhaps because he was too well-known in the locality. Thus

47 Cf. Buddhist India, p. 94.
48 Majjhima Nikāya, (P.T.S.). II. 152.
49 Jour. of the U. P. Hist. Soc., July, 1937, No. 111.
50 Ep. Ind., XXI, No. 10. p. 59.
51 Sanskrit-English Dictionary, p. 1164.
52 Lüds, No. 32.
53 Ind. Ant, Vol. XXXIII, p. 37. f No. 7.
54 Buddhist India, p. 93.

we are assured of the existence of guilds of traders who had to lead caravans, specially in the Kushāṇa period which witnessed the development of silk-trade between China and Rome through India. The Caravan-leaders held the most responsible and respectable position, giving directions to other traders as to halts, watering and measures preventing robbery. Marshall has, however, traced the merchants' guilds to an earlier period. The excavations at Bhita (1911-12) have brought to light an earliest structure, which he calls "the house of the guild" from a seal-die of terra-cotta, bearing the legend "Sahijitiya nigamasa" in letters of the 3rd or perhaps of the 4th cent. B. C.. Among other finds deserve mention the house or shop of Nāgadeva, ascribed to the 1st cent. B. C. and seventeen copper-coins of Kaniṣka and Huviṣka and also sealings of guilds ("of the guild-nigamasya)[55] in Kushāṇa characters. The Basārh seal excavations also indicate something like a modern chamber of commerce at Pāṭaliputra in the later period.[56] Each merchant-guild was headed by an alderman (seṭṭhi).

It is interesting to note the verse of the Harivaṃśa (ch. 86, V. 5):—

"Sva-karma-dravya-yuktābhiḥ patākābhir-nirantaraṃ,

śreṇīnañ-cha gaṇānāṃ-cha mañchā bhānty-achalopamāḥ". (Pavilions, high like hills, of (various) guilds appear, always decorated with banners containing the emblems of several crafts).

The above verse describes the pavilions for different guilds, built for accomodating visitors who would attend the wrestling match between Kṛṣṇa and the followers of Kaṃsa. This shows the importance of the guilds.

We have ample evidences of the existence of different guilds, their various functions and power in the Gupta period. Kālidāsa refers to a guild of architects (śilpi-saṃghāḥ - Raghu XVI.38) and to the chief of a guild (śreṣṭhinó in Śak.). We

55 A.S.I.R., (1911-12), No. 56-58.
56 " 1903-4.

come across the terms like the 'Naigamas' (Vik. 4.13) and the Śreṣṭhī-s (Śak) to denote the representatives of different guilds. The Bṛhatsaṃhitā alsc mentions guilds (gaṇakulaśreṇyaḥ in X. 13) and the chief of guilds (gaṇapa in XXXII. 18) and it forecasts their good and bad days (XXXII. 18 and śrenīpurakośānāṃ .... aśubhakārī in XXXV. 19). The Bṛhat-jātaka also testifies to the development of various crafts and industries. (naikaśilpyudbhavaṃ in V. 19; "yantrāśmakāraṃ" - maker of machines and fire-engines etc. and clever in stone-work), "dhātu-kuśalaṃ bhāṇḍaprakāreṣu vā" (clever in metal-works and earthen-ware works) in ch. XIV. 1. The artisans were held in high esteem by kings like Jayanāth and Sarvanāth, as evidenced by the Karitalai (493-4 A. D.) and Khoh C. P. inscriptions (497 and 512 A. D. -- Fleet pp. 118, 112, 127 and 131) and so we can infer the progress of crafts and industries in the Gupta period. The Karitalai inscription mentions Sarvadatta as chief of architects ("sthapati-samrāja"). This shows the rise of craft-guilds also in the Gupta age, which is confirmed by the Basārh seals.

The clay seals of Basārh (Vaiśālī) are very interesting evidences of the guilds of the Gupta age. They contain, among others, the following legends:—

1. Śreṣṭhi - Sārthavāha - Kulika - nigama.
2. Śreṣṭhi - kulika - nigama.
3. Śreṣṭhi - nigama.
4. Kulika - nigama. and
5. Prathama - kulika.

The interpretation of the term 'nigama' is subject to controversy. Dr. Bloch renders it as guild or "Corporation". His comment on the above seals deserves attention; "The most numerous among the seal inscriptions is that referring to the Corporation or guild of bankers (Śreṣṭhī), traders (Sārthavāha) and merchants (Kulika) .... It looks as if during those days something like a modern chamber of commerce existed in upper India at some big trading centre, perhaps at Pāṭaliputra. "A.S.I.- A. R - 1903-4, p. 104). Dr. D. R. Bhan-

darkar, however, suggests a separate meaning, i.e. a city, which is accepted by Dr. R. C. Majumdar (C.L.A.I.-p. 44). Of course, in the present state of things it is hard to believe in the existence of "something like a modern chamber of commerce" at Basārh or Pāṭaliputra at such an early date. Hence it is safer to take it in its ordinary sense of a market-town (kraya-vikraya-vyavahārasthānaṃ) in which it is frequently used in literature. The Basārh seals indicate the commercial transactions for which they were manufactured by guilds of merchants (Śreṣṭhins), caravan - traders (Sārthavāha), artisans (Kulika) and chief artisans (Prathama-kulika); which were the most powerful organisations with ruling power in different marts of India in the Gupta period.

Basārh was a provincial headquarter under the Guptas and 274 seals of a joint guild (A.S.I., 1903-4, pp. 101 ff), unearthed there, were evidently used in letters, received from the different branches of this great institution in various towns of N. India. (C.I.I., - III. 70).

We have in clay-tablets seals of the guild always accompanied by those of private individuals. As we have already had different branches of the joint guild, we may infer that duplicates of its common seal must have been used along with the seal of the president or the secretary of each local branch to prove the genuine character of its letters. The seal of the joint guild is found accompanied with that of Īśānadāsa in 75 cases, that of Mātṛdāsa in 38 cases and that of Gomisvāmi in 37 cases and so we may accept them to have acted as the President or the Secretary of its branches at important towns like Pāṭaliputra, Gayā or Prayāg. Harigupta, Bhavasena and Ghosha might have similarly managed the branches of less important towns as their seals are found to be accompanying that of the joint guild only 5 or 6 times. These branches sometimes served the interests of temples as proved by the seals bearing inscriptions like (Jayantyananto Bhagavān), Jayantyananto Bhagavān, Jitaṃ Bhagavatā, Namaḥ Paśupataye etc.

The most important inscriptions in this connection are noted below:—

The Mandasar inscription (C. 437-38 A. D.) of Kumāragupta and Bandhuvarman (Fleet. No. 18 pl. XI) speaks of a guild of silk-weavers who shifted themselves from Lāta to Daśapura, gave up their original crafts and took to various new pursuits and built "a noble and unequalled temple of the bright-eyed sun with the stores of wealth acquired by craft" ("śilpāvāptairdhanasamudayaiḥ paṭṭavāyairudāraṃ śrainībhūtairbhavanamatulaṃ kāritaṃ").

The Indore C. P. (Fleet- p. 68, No. 16, pl. IX-B) refers to a Brāhmana's endowment, treated as the perpetual property of the guild of oilmen of which Jivanta was the head, residing at the town of Indrapura (5 miles to the N. W. of Dibhai in N. W. Province.

The Gadhwa inscriptions of Chandragupta II (Fleet, pp. 37-8) and Kumāragupta I (pp. 40-41) refer to some perpetual deposits with the guilds, the names of which are unfortunately lost to us because the inscriptions concerned are rotten in the particular parts. Mātṛdāsa [Ka-Mātṛdāsa-pra (mukha)] is reported therein to be chief of a guild at Gadhwar, (Fleet, p. 37-38).

This is confirmed by seals of Mātṛdāsa unearthed from the Basārh excavation. (A.S.I.- A. R.- 1903-4, p. 110). The Bihar stone Pillar inscription (Fleet C.I.I., vol. iii, p. 50) of Skandagupta records a permanent endowment (Akshayanīvi) with a guild of a town of Ajapuraḳa, equated with the modern village of Ajayapura near Bihar Police Station. Thus the guild serves the purpose of a bank. The Pāhārpur C. P. of 478-9 A. D. (E. I., XX., p. 61) speaks of the city-council headed by the guild-chief of merchants at Puṇḍravardhana. The Damodarpur C. P., Nos. 1, 2 and 4 (E. I., XV., p. 130, 133 and 138-9) also mention the term 'nagara-śreṣṭhī' which may mean the "President of the guild of merchants of a town". ("Kumarāmātya - Vetravarmaṇyadhiṣṭhānādhikaraṇaṃcha nagara-śreṣṭhi - Dhṛtipāla - sārthavāha - Vandhumitra-prathama-

kulika - Dhṛtimitra - prathamakāyastha - Śāmbapāla - puroge saṁvyavaharati").

POWER AND FUNCTIONS OF A GUILD: The analysis of the inscriptions already mentioned, specially the Nasik inscriptions[57] and the Junnar inscriptions,[58] shows clearly that the guilds served as banks in ancient India. The people had confidence enough to invest money or income of fields with the guilds. The inscriptions[59] also speak of a permanent endowment in a guild under conditions that the capital could not be touched and only the interests, realised every month (māsānumāsaṃ) might be utilised to meet the expenses of serving 100 Brahmins and the hall (puṇyaśālā). Two guilds were entrusted with the charge of the puṇyaśālā.

According to Cunningham, the merchant-guilds issued their own coins in ancient India:—"Private coinage is of extreme antiquity and the Purāṇas agree in character with one species at least, of private coinage, still in vogue; it is reasonable to suppose that the purāṇas were issued not by any state, but by bankers and merchant-guilds. This hypothesis alone can explain their number and their wide distribution", (Anc. Coins) .

Gautama[60] speaks of guilds of cultivators, traders, cattle-rearers, money-lenders and artisans having liberty to lay down their own laws (sve sve varge) to be respected by the king and prescribes the legal procedure that was to be followed by the guild. The term 'varga' of Gautama indicates the formation of guilds in different branches of occupation, mentioned in the Sūtra, for the safeguarding of their own interests.

The Vinayapiṭaka[61] bears a clear testimony to the great influence the guild exercised over its members. It lays down

57 Lüd., Nos. 1133 & 1137.
58 Lüd, Nos. 1162 & 1165.
59 Ep. Ind., Vol. XXI, No. 10. p. 55.
60 Gau., II. 2. 20-22.
61 Vinay texts, IV. 226; *J.R.A.S.*, 1901. p. 865.

two disciplinary rules, first the guild was entitled to arbitrate on certain occasions between its members and their wives; and second, its permission was required for the ordination of the wife of any of its members. If any member committed any wrong, he was treated as a condemned criminal.

The Mahābhārata[62] speaks of guilds as one of the main supports of the king. The guilds gained so much strength that the Śāntiparvan[63] advises the creation of dissentions among the heads of guilds as one of the means of injuring the enemy. Duryodhana is said to have hesitated to face the heads of the guilds after his defeat at the hands of the Gandharvas.[64] In the Rāmāyaṇa[65] we learn that the heads of merchant-guilds welcomed Rāmachandra on his entry into the city. This indicates the position and prestige of the guild and of its head in the social life of the city like that of a modern sheriff. Manu also refers to Śreṇīdharma or usages of guilds having the force of law. Nārada lays down that the king shall maintain the laws of the guilds and even such regulations as "we shall ask the subjects not to pay taxes to the king, we shall go naked, we shall gamble etc." This shows how the guilds became so very powerful in the period of Nārada that the king had to abide by even the most unreasonable rules of these corporate bodies.

It has already been pointed out that Kauṭilya mentions guilds also as great military powers. "The corporations of warriors of Kāmboja, Surāṣtra and other countries live by agriculture, trade and wielding weapons," Some others are styled as living "by the title of a Rājā."[66] This shows that

62 Āśramavāsikaparvan; Ch. VII; verses- 7-9. (P. T.)

63 Śāntiparvan, Ch. 59. v. 49; Ch. 141, 64. (P. T.)

64 Vana., Ch. 248, 16.

65 Laṅkākanda, Cants. 129. v. 4. "Śreṇīmukhyāstathā ganāḥ."

66 Kau., XI. 1. 378. Bhandarkar takes Śreṇīvala (IX. II) to mean "soldiers maintained by guilds; whereas Dr. R. Shamasastry translates it as " a corporation of soldiers." Dr. R. C. Majumdar notes. however, that in course of his conversation with Prof. Bhandar-

trade-guilds acted as soldiers as well in times of need. The power of the guilds can be easily inferred from the remark of Kauṭilya - " The acquisition of the help of corporations is better than the acquisition of an army, a friend or profit.[67] He assesses the troubles due to a corporation of people and to a leader and in opposition to his teacher, opines that "it is very easy to get rid of corporation, whereas a leader backed up with support causes oppression by injuring the life and property of others."[68]

The power and prestige of "the chiefs of military corporations" is distinctly pronounced by the fixation of their pay as 8,000 paṇas per annum, equal to that of the chiefs of elephants, horses, chariots etc. and Kauṭilya remarks that "with this amount they can have a good following in their own communities."[69]

The laws of Nārada and Bṛhaspati (probably of the period from the 5th to the 7th Cent. A. D.) show the gradual development of the guild-organisations. Bṛhaspati's passage (XVII. 5-6) "Grāmaśrenīgaṇānāṁcha ṣamketaḥ samayakriyā.
vādhākāle tu sā kāryā ḍharmakārye tathaiva cha
chāṭachaurabhaye vāḍhā sarvasādhāraṇā smṛṭā
tatropaśamanaṃ kāryaṃ sarvairnaikena kenachit".

(The compact of villagers, artisans and associations is an agreement. That must be observed in times of difficulties and for the performance of duties. The difficulty, born of fear of thieves and irregular troops is considered common to all and that must be removed by all and not by one alone) shows that corporate activities alone (and not any particular man, however great or powerful he may be) can remove the Himalayan difficulties and pave the way for the smooth discharge of everyone's duties. Bṛhaspati's texts let us know the process

kar the "idea of Śreṇīvala" in the sense of guilds also as great military powers was suggested to him.

Cf. Cor. Life in Anc. Ind., p. 24.

67 Kau., XI. I. 378.
68 " VIII. IV. 333.
69 " V. III. 247.

of the formation of a new guild (XVII. 7). The intending members must first breed mutual confidence among themselves (viśvāsaṁ prathamaṃ kṛtvā) by means of an ordeal (koṣeṇa - Bṛh XVIII; 7, a written convention (lekhyakriyayā) and the guarantee of the umpires (madhyasthaiḥ); and then set to work. (kuryuḥ kāryāṇyanantaraṃ). The written constitution of the guild formed a legal document which might have been obeyed by all. He who willfully disregarded it, was liable to punishment by confiscation of his property or by banisment. (Bṛh. XVII. 13).

Nārada warns that "those who cause dissensions among the members of a guild, shall undergo severe punishment, because they would prove extremely dangerous like an (epidemic) disease, they are allowed to go free." (X. 6). This is a clear testimony to the importance of guilds as an important factor in the society. Besides their normal duties in the field of their own profession, the guilds were engaged in works of public welfare. They would build assembly houses, sheds for the supply of drinking water to the travellers, temples, pools and gardens (obviously for the public) and help the poor in the performance of sacraments and religious rites. (Bṛh, XVII. 11). This sort of philanthropic activities of the guilds are recorded in our inscriptions. The Junnār and the Māndāsor inscriptions, already mentioned before, show the works of the excavation of a cave and the making of a cistern by the guild of corn-dealers and also the construction of the Sun-temple by that of the silk-weavers respectively. It is really very surprising that the silk-weavers of Lāṭa were not only expert in their own professions but also interested in many other arts and sciences. So in their new habitations at Daśapura they took to various pursuits and showed their aptitude for fighting, astrology and religious discourse etc. Their tastes in finer arts like poetry is also equally attested by the fact that at their instance Vatsabhaṭṭi composed the inscription. Thus the guilds proved to be centres not only for the development of crafts and industries but also for the dissemination of liberal culture and all-round progress.

THE WORKING OF THE GUILDS: It has already been observed that each guild was regulated by a committee headed by the chief. The Śāntiparvan[70] enjoins that the chiefs of guilds should meet together to do good to the interests of guilds. (Gaṇamukhyaistu Sambhūya kāryaṃ gaṇahitaṃ mithaḥ"). Yājñavalkya[71] says.—

"Dharmajñāh śuchayó lubhdhā bhabeyuḥ kāryachintakāḥ.

Kartavyaṃ vachanaṃ teṣāṃ samūhahitavādināṃ.
Śreṇīnaigama-pāṣaṇdi-gaṇānāmapyayaṃ vidhiḥ
bhedaṃ chaiṣāṃ nṛpo rakṣet pūrvavṛttiṃ cha pālayet.

This shows that for the smooth working of the guilds must be appointed some pure and virtuous men as their executive officers ("kāryachintakāḥ"), most probably elected by the members of the guilds and that their words meant for the good of the group were obeyed by all. The Śāntiparvan[72] says that the persons who forsake their duties to the guilds to which they belong, lose virtue:—

"Jātiśreṇyadhivāsānāṃ kuladharmāscha sarvataḥ,
varjayanti cha ye dharmaṃ teṣāṃ dharmo na vidyate.'

Kauṭilya throws clearer light on the working of the guilds. He points out that "three commissioners or three ministers who can give instruction to artisans, who can be trusted with deposits and who can be relied upon by guilds of artisans, may receive the deposits of the guilds. The guilds shall receive their deposit back in time of distress."

DEMOCRATIC CHARACTER OF GUILDS: Though the guilds, were administered by executive officers, the voice of individual members was equally honoured. Bṛhaspati speaks of a house of assembly, where the members of the guild met together at regular intervals. (XVII. 11). Nārada prescribes rules for the attendance of members (X. 3) and Mitramiśra mentions the sound of a drum or other instruments used as a signal for

70 Śāntiparvan, Ch. 107, verse. 25. (P. T)
71 Yāj., II. 191-192.
72 Śāntiparvan, Ch. 36, verse 19.(P. T.)

such attendance of members in the assembly hall where they could perhaps exercise their freedom of speech, as evidenced by Kātyāyana who writes:—

"Yuktiyuktañcha yo hanyāt vakturyo nāvakāśadaḥ
ayuktañchaiva yo vrūyāt prāpnuyāt pūrvasāhasaṃ".

(He who suppresses what is right, who does not give scope to the speaker or who says something improper, is to be punished with the first amercement.). Moreover, Bṛhaspati holds that whatever is obtained or saved, or whatever debt is incurred by the executive officers on behalf of the guild, should be divided equally among them, i.e, all the members ("sarveśāmeva tatsamamiti". But if the officers spent the borrowed amount for personal interests, they were liable to compensate it. This shows the ultimate answerability of the officers to the entire assembly.

Mitramiśra helps us to know how the general assembly of the guild determined the recruitment of its new members and the exclusion of its old ones. ("Ye tu samudāyānugrahāt tadantarbhāvaṃ prāptāḥ ye cha samudāyakṣobhādinā tato vahirbhūtāstān pratyāha sa (Kātyāyanaḥ) eva"). Kātyāyana also ordains that new members would be treated as equal to old ones in all respects and that the excluded member would cease to have any rights or privileges of the guild. Chaṇḍesvar also writes in his Vivāda-ratnākara that the membership of a guild depended on the will of the general assembly but one might cease to be a member of his own accord. Thus the democratic character of guilds is established beyond dispute.[73]

GUILDS AND THE STATE: The power of the guilds to make laws, which must be accepted by the king, has already been referred to. But that does not mean that they went on uncontrolled. The nature of relationship between the guilds and the state may be better put as that of reciprocity. Each of them regarded the other. As the king respected the

73 Kau., IV. I. 200.

usages of the guilds, the guilds were also thoroughly determined by the king. Manu says that the breach of contract by any member of a guild, out of avarice, must be penalised with banishment from the realm ("taṃ rāṣṭrāḍ vipravāsayet"). Yājñavalkya[74] also provides that "if a man steals the property of a guild, the king shall confiscate all his property and banish him from the realm." On the other hand, the king looked to the interest of merchants and artisans of guilds. Kauṭilya prescribes mercy ("abhayaṃ") to workers for their neglect in duty for the first time but continued neglect and violation of law of the guilds was always punished with expulsion or death. Guilds of artisans had to fulfil their engagements, otherwise they were fined and wages forfeited.[75] Kauṭilya[76] also shows how kings, in hours of financial crisis, engaged a merchant spy to collect money from guilds. He has laid down rules for the regulations of the life and conduct of the chief of the corporations —"The chief of corporations should endear himself to all people by leading a virtuous life, by controlling his passions and by persuing that course of action which is liked by all those who are his followers."[77] Jolly points out that the chief motive of legal agreements between the guilds and the state was to bring corporations under the strict control and protection of the state.[78] Kauṭilya's attitude is that the king should establish an organic relationship with the guilds so that mutual corporation and confidence may bring about smooth workings of the state. The state-interference is also attested by Bṛhaspati who tells us, "should they (heads of an association) agree, actuated by hatred, on injuring a single member of the fellowship, the king must restrain them; and they shall be punished, if they persist in their conduct." (XVII.19). This text shows the king's power in suppressing the misconduct of the guild-chief and

74 Yaj., II. 187-192.
75 Kau., IV. I. 201-207.
76 " V. II. 245.
77 Kau., XI. I. 381.
78 Hindu law and custom, p. 294.

in guaranteeing the security of an individual from their oppressing hands. The next verse of Bṛhaspati also deserves our notice:—

"Mukhyaiḥ saha samūhānāṃ visaṃvādo yadā bhavet
tadā vichārayet rājā svadharme sthāpayechcha tān".

(X. 20) (When the executive officers had conflict with all members of other guilds, the king should try and enforce them to the right path). Mitramiśra states clearly - "Samūhaśaktau tasya daṇḍo rājñā vidheyaḥ" (when the assembly is unable to remove the undesirable executive officers the king should punish him. Hopkins[79] remarked, "if the king was bound to respect the laws of guilds, he was none the less expected to see that the members of the guild followed their own laws."

PARTNERSHIP: Partnership assumed an organised form in the Buddhist age. Buddhist literature contains many references to this system, either permanent or on specified occasions only.

The Chullakaseṭṭhi Jātaka speaks of a young man's enterprise. He bought the contents of a ship which touched at a port, only by his ring. Then 100 merchants from Benares heard of this transaction, each of them paid him one thousand coins and obtained a share of the ship. Next they paid again, another thousand each and took possession of the entire ship.[80]

The Kūṭa-vāṇija Jātaka speaks of 2 merchants of Benares who took 500 wagons of merchandise from Benares to the country district with an equal interest of each in the stock-in-trade.[81]

We learn also of two traders of Śrāvastī entering into partnership and loading 500 wagons full of wares and journeying from east to west for trade.[82]

79 J.A.O.S., Vol. XIII.
80 Jāt., Vol. I. p. 114.
81 " I. 404. "Pañcahi *sakaṭa-satehi bhāṇḍaṁ*".
82 " II. 181.

Temporary partnership among merchants is referred to in the Mahāvāṇija Jātaka.[83] The Serivāṇija Jātaka[84] also relates the story of 2 merchants trading as partners. The horse-dealers of the north are also heard of to have carried on their business jointly.[85]

The Baveru Jātaka[86] speaks of partnership in a deal of birds imported to Babylon from India. It is not unlikely that joint-business was undertaken only to prevent mutual underselling or the cornering of any wares.[87]

These references show the prevalence of the system of partnership in business in ancient India. Besides these, we hear of joint transaction from Dharmaśāstras and Arthaśāstra. Nārada speaks of concerted action of traders:—

"Vaṇikprabhṛtaya yatra karma sambhūya kurvate,[88]
Tatsambhūyasamutthānaṃ vyavahārapadaṃ smṛtaṃ."

Each of the merchants contributed something which formed the capital and worked jointly for the purpose of gain. As the individual contribution formed the basis of transaction, Nārada prescribes that "the loss, expenses and profits of each partner are proportionate to the amount contributed by him to the joint-stock company." Kauṭilya[89] and Yājñavalkya[90] provide that "those who carry on any co-operative work shall divide their earnings either equally or as agreed upon among themselves."

Bṛhaspati laid down strict rules for the selection of partners because on their nature and activities depended largely the success of the joint business:— "Trade or other occu-

83 Jat. Vol. IV. 350-351 ; G.-179.
84 " I. 111.
85 " " II. 31. "Uttarāpathakā assavāṇijā' and 287.-"Uttarāpathajānapadā pañcasatāassavāṇijāasse vārāṇasiyaṁ ānetva vikkinanti.'
86 " III. 126.
87 " I. pp. 99, 121. 194 & 270.
88 Nār, I. p. 133.
89 Kau. III, Ch. XIV, p. 185.
90 Yāj, II. 259.

pations should not be carried on by prudent men jointly with incompetent or lazy persons or with such as are afflicted by illness, ill-fated or destitute". (XIII.3) and "A man should carry on business jointly with persons of noble parentage, clever, active, intelligent, familiar with coins, skilled in revenue, and expenditure, honest and enterprising". (XIII-I).

"Aśaktālasa-rogārta-mandabhāgya-nirāśrayaiḥ/
Vānijyādyāḥ sahaitaistu na kartavyā vudhaiḥ kṛiyāḥ//"
—Bṛh —XIII. 3.

"Kulīna-dakṣānalasaiḥ prājñai-r-nāṇaka vedibhiḥ/
āya-vyaya-jñaiḥ śuchibhiḥ śūraiḥ kuryāt saha kriyāḥ//"
(Bṛh—XIII. I)

The corporate body looked after the interests of an individual even after his death. Bṛhaspati says- "should any such partner in trade happen to die through want of proper care, his goods must be shown (and delivered) to officers appointed by the king. (XIII. 14). Yājñavalkya also says that in case a partner goes to a foreign land and dies there, his relations ("dāyādabāndhavāḥ jñātayo vā") may come and take his property. (II. 264). If no claimant comes forward, the king shall appropriate his property, of course after waiting for ten years according to Nārada.

PRINCIPLES OF PARTNERSHIP: Partnership of two merchants, called respectively "wise" and "wisest", as referred to in Kūṭa-vānīja-Jātaka,[91] where they are reported to have quarrelled over shares whether the wisest would take a double share for his special wisdom, shows us clearly that though as a matter of principle the partners shared profits proportionate to the contributions, the idea rewarding a particular sharer for his special proficiency was not altogether unknown. We may also infer that skill or proficiency was not yet universally recognised as a factor of special reward; and this ended in some sort of discontent. Most probably there was not yet any system of written record of partnership or even

91 Jāt. I. p. 404 ff.

of a verbal agreement as to profits or losses. As it has been held by certain scholars, the equal contribution of capital and the equi-distribution of gains or losses was the usual practice of the commercial markets; partnership took the nature of a joint venture terminable at the end of each enterprise.[92]

Kauṭilya also speaks of partnership of cultivators or merchants or craftsmen. He provides, "cultivators or merchants shall pay to their labourers as much of the latter's share as is proportional to the work done."[93]

Partners shall never, of their own accord leave company. Any negligence in work of a partner is sure to be punished. In case of a glaring offence "he shall be treated as the condemned."[94] Kauṭilya[95] mentions partnership even in sacrificial acts, where the earnings were divided "either equally or as agreed upon, excepting what is specially due to each or any of the priests."

Bṛhaspati has also prescribed the principle of reward of punishment to an individual member. The individual member was always responsible for his conduct to the corporate body. When any fraudulent act has been discovered, he ("vañchakaḥ") must be cleared by oath and ordeal (Bṛhas. XIII. 7, ed. K.V.R. Aiyanger) and the partners are pronounced to be arbitrators and witnesses ("Parīkṣakāḥ sākṣīṇaścha ..... sandigdhe'rthe"—XIII. 6) for one another in doubtful cases. If this guilt was established, he should be paid his capital and expelled from the joint-stock company. On the other hand, Bṛhaspati prescribes reward by the same body to a partner who "by his own efforts preserves (the common stock) from a danger apprehended through fate-or the king, shall be allowed a tenth part of it (as a reward)". XIII. II), "yastu svaśaktyā paripālayet tasyāṁśo daśamaḥ smṛtaḥ; cf. Nārada. III. 6).

92 Cf. Some Economic Institutions of Ancient India,- University of Allahabad Studies, 1942.

93 Kau., III. XIV, 185, cf also Manu, VIII, 211.

94 " 186.

95 " 186

Unlike trade, crafts and industries were carried on on a different principle of partnership, which was based not upon the capital but upon the skill and technical knowledge of each partner. Hence Bṛhaspati says (Ch. 13, V. 34) that "when goldsmiths or other craftsmen working in silver, thread, wood, stone or leather practice their craft jointly, they shall share the profits in due proportion, according to the nature of their works.

Thus we see that guilds played a very prominent part in the promotion of trade in ancient India. Hopkins has made a comparative estimate of works and achievements of guilds, ancient and modern in his "India old and new" :— "If we review their history, we must, I think, see in them an important factor in the development of mercantile interests at a time when such a combination as they represented, was indispensable to the advancement of middle classes in their struggle for recognition at the hands both of despotic kings and of an organised priesthood that was bent on suppressing the elevation of the third estate. With the growth of the guilds the new axiom of the latter law was evolved, whereby the king was advised not to oppress the guilds and not to tax too heavily. So commerce in the modern sense became possible." "Just as village panchayets preserved self-government in the villages, the guilds preserved self-government in trade."[96]

"Hemakārādayo yatra śilpaṃ saṃbhūya kurvate/
Karmānurūpaṃ nirveśaṃ ḷabheraṃste yathāṃśataḥ//

(Bṛhaspati., ed. K. V. R. Aiyanger, Baroda Oriental Institute, 1941, ch. 13, 34, p 135)

96 Ind. His. Cong., 1951, p. 122, (G. S. Dikshitar).

APPENDIX

India's Intercourse with Iran in the Seventh Century A. D.

India's trade-relation with the countries of Western Asia in the earlier centuries has already been dealt with in chap.I. Here an attempt has been made to show India's intercourse with Iran in the 7th cent. A. D.

Amianus Marcellinus lets us know that India sent her goods to the great annual fair at Batne near the Euphrates about the 4th cent. A.D.. The Chinese evidences prove that China traded with Western Asia through India. The Arabs and Persians sent ships to China through Indian ports for trade. I-tsing came to India from China by a Persian vessel. (A Record of the Buddhist Religion as practised in India and thc Malay Archipelago by I-tsing, trans. by J, Takakusu, Oxford, 1896; p. xxviii, Vajrabodhi, while on way to China from South India reached a port in Ceylon and saw there thirty-five Persian vessels in 720 A,D.

We learn from a Pahlvi work that "half a century before Harṣa and Pulakeśin another Indian king, named Devasaram sent an embassy to the Persian king Khusru I with rich presents and a set of chessmen with board," (The classical Age, vol 3, p.628).

"According to Ṭabari, Nashirwan (Khusru I) also despatched an expedition to India which resulted in the gain of some provinces. There does not seem to be any certainty as to such a campaign but there may well have been an expedition in this direction." (History of Persia, vol. I, p.456 by Sir Percy Sykes, 1930). This account may not be historically true but it indicates an intimate relation between India and Western Asia, Barzouhyeh, a subject of Khusru I is recorded

to have visited India to acquire proficiency in Indian medicine.

An interesting evidence of the intercourse between India aud Iran is the account of Ṭabari (838—923 A.D.). The theory of an exchange of embassies between the Persian KingKhusru II and the Chālukya king Pulakeśin II was started by Fergusson on the basis of five pictures from the ceiling of the cave No.I at Ajanṭa. (J.R.A.S., 1879, pp.155 ff). The principal figure of these pictures is a stout man with black beard, cross-legged on a cushion and holding a drinking cup in his right hand to take wine. Two maidens stand on his right and left to supply the principal figure with wine or water and the third female, perhaps his companion or wife is also seated beside him. The male figures are represented also in other pictures and they are. according to Fergusson, the Persians. Besides these, a remarkable fresco on the walls of the cave represents an Indian king, seated on his throne and receiving a deputation of people who look like the Persians as drawn on the roof and who bear a letter from some foreign potentate and who are also dīsmissed with return presents. The cave is ascribed to the period from 610 to 640 A.D. by the same scholar and so the central figure, evidently the Persian king has been identified with Khusru II who ruled from 591 to 628 A.D., A few Sassanian coins, very often found in India, with their legend Vāṣudeva in Devanāgarī script are assigned to Khusru II and the legend in Indian characters speaks of his close relation with India. But the Indian king represented on the fresco is generally identified with Pulakeśin II on the evidence of the great Arab historian Ṭabarī who writes the following passage as the reply of Khusru II to the charges brought against him by his son Shiruyieh.

"Two years ago, Pulakeśi, king of India, sent to us, in the thirty-sixth year of our reign, ambassadors carrying a letter imparting to us various news and presents for us, for you and our other sons. He also wrote a letter to each of you. To

you he presented—don't you remember it?—an elephant, a sword, a white falcon and a piece of gold brocade. When we looked at the presents and at the letters we remarked that yours bore the mark "Private" on the cover in the Indian language. Then we ordered that the presents and other letters should be delivered to each of you but we kept back your letter, on account of the remark written on the outside. We then sent for an Indian scribe, had the seals broken and the letter read. The contents were—"Rejoice and be of good cheer for on the day Dai ba Ādhar, of the thirty-eighth year of the reign of Chosroes, thou wilt be crowned and become ruler of the whole empire. Signed Pulakeśi." But we closed this letter with our seal and gave it into keeping of our consort Shirin. (J.R.A.S., 1879, pp. 165 ff.).

The name of the Indian king, mentioned in Ţabarī's writing is, according to Noldeke, the translator of the passage, Premésha. But he argues that "as R and L are written with the same sign in Pehlvi, R is to be taken as a false mode of expressing L. As M may be substituted for K (Q) in the Arabic or in the Pehlvi, it follows that the name may be read as 'Pulikesa'. (Ibid, p. 166 f.n.1). But the term 'Premésha' may be a transliteration of 'Parameśa' a honorific epithet of Indian kings. (cf. Ettinghausen Harşavardhan, p. 53). Dr. R. C. Majumdar finds no reason for a scene of a political embassy amid religions surroundings in a cave hundreds of miles away from the capital city. M. Foucher also remarks on the paintings of Ajaṇṭā :—

"Regarding the supposed 'Persian embassy' in cave I, if the picture was the only one that represents people dressed in Persian costume, there might have been some reason to consider it the unique exeeption from the rule; but this costume appears almost everywhere in the paintings,..... and the ready knowledge of this dress shown by the artists at Ajaṇṭā is sufficiently explained by its nearness to the western coast of India. ..... I do not think ..... that the

caissons of 'the ceiling in cave I, ... show us the Sassamian king, Chosroe in company of his beautiful wife, Shirin." (Journal of the Hyderabad Archeological Society, 1919–20, p.99). Besides, Yazdani ascribes the paintings of cave I to the 5th cent. A.D. and notices therein the supreme influence of the Buddhist doctrine, (J.B.O.R.S., vol. XXVII, 1941, p. 14). The argument that Khusru's connection with India is proved by some coins as stated before, is no longer tenable. Cunningham says that these coins must have belonged to a prince of Multan, Vāsudeva by name, a contemporary of Khusru. (Archeological Survey of India Report, vol. V. p.123).

Dr. R. C. Majumdar admits that "an Indian king did send ambassadors to Khusru I, carrying letters and presents for him and his sons"; but rejects the theory that Khusru II sent one embassy to the Indian king, Pulakeśī. This embassy was sent in 626 A.D. and Dr. Majumdar prefers to hold that the Indian king seems to be Harṣavardhana instead of Pulakeśin II on the following grounds :—

First, "Harṣa's empire was closer to persia which was connected by an old and frequented route with India,

Second, Bāṇa refers to intercourse between India and Persia, because Harṣa's horses were imported from Persia, among other countries. (Harṣacharita, ed. Cowell and Thomas, p.50). Taranath, the Tibetan historian also confirms it by stating that a Persian king presented horses to the king of Madhyadeśa and the latter sent in return a few elephants. (Taranath. trans, by Schiefner, p.94).

Thirdly, Bāṇa says that the conquest of Persia was regarded by Harṣa's Chiefs as not so difficult: "the land of the Turushkas is to the brave but a cubit. Persia is only a span." (Harṣacharita, C. & T., p.210). Taranath's story of the persecution of the Mlecchas near Maulasthāna (probably Multan) at the hands of Harṣa, though undoubtedly false, indicates the close relationship between India and Persia during Harṣa's rule.

Lastly, "the Persian king refers to the Indian monarch as the king of India." As Persia stands near N. India and is more closely associated with that part, we can reasonably infer that the term 'king of India' means the king of North India. Moreover, there is little evidence of the connection between Pulakeśin II and Khusru II and hence Dr. Majumdar thinks that it is more legitimate to hold that the king of India who sent embassies to Khusru II of Persia was Harṣa and not Pulakeśin. (cf. "Pulakeśi and Khusru II". Jour. Ind. Hist., vol. 4, pt.II, pp.29–33).

But the term 'Parameśa' (transliteration of Frmesha, as already referred to) helps us little in the proper identification. This title was first adopted by Yaśodharman of Malwa in the 6th cent. A.D. and it became more common a few centuries later. Even Harṣa of Kanauj did not style himself so, as this title is not found in any of his official documents. Bāṇa, of course, refers to Harṣa as Parameśvara but it may be taken as a case of mere śleṣa (a double entendre) and so it may not be a historical fact. This title 'Parameśvara' was however, used by Pulakeśin II and more displayed by his successors (cf. Karnul c.p. of Ādityavarman, Ind. Ant., vol. XI, p. 67) in the inscriptions stating his victory over Harṣa. So it may be equally argued that Pulakeśin II had greater claims than Harṣa for being regarded as Parameśvara, who was the author of the embassy. But Dr. Majumdar's arguments in favour of Harṣa, being no less strong can not be set aside.

Cunningham, again, refers to other contemporary rulers, a local Chief Vāsudeva with coins of bilingual legends ruling over Bahman, Multan, Tukān etc. and also Ṣāhi Tigina who is called master of Tukān and Khurāsān in the Pahlavi legend and the 'Supreme lord of India' and Iran in the Nāgarī (Hitivi ca Airān ca paramesvara)—(Later Indo-Scythians, p. 123). Mr. B. Ghosh mentions the possibility that "one of these two rulers with their undoubted Sassanian affiliation and their territory close to Persia, is more likely to have been responsible for the embassy to the Persian Court than any other

contemporary Indian king." (J.B. R.S., vol. XXX. Pt, II, p. 189). But he puts forward an objection to this theory by saying that "the correspondence between an "Indo-Sassanian prince and Khusru must have been in Pahlavī and it is unlikely that the former should mention his Indian title parameśvara and not its Palhavī equivalent in his letter." (p. 190),

The critical study of the respective claims of three contemporary Indian rulers shows that the insufficiency of the data prevents us a final choice between them. However, we have little doubt India had an intimate connection with Iran in the period of our enquiry. This fact is also confirmed by Yuan Chwang who refers to Long-Kie-lo, a country to the west of India, bordering on the ocean and remaining "under the Government of Persia" (Beal, II, p. 277), which had "some hundred Saṅghārāmas and perhaps 6000 priests" and also "several hundred Deva temples," mostly of the Pāśupata sect. Yuan Chwang reports that even in Persia there were two or three Buddhist monasteries and numerous Deva temples. (Beal, II, p. 278). We have at Dandanuliq in the Chinese Turquestan a picture (of c. the 8th cent. A D.) of a Bodhisattva in the guise of a Persian, showing distinctly some Indian features and this picture may be a specimen of Buddhist art, developed in Iran and it proves India's cultural contact with Iran in the 7th Cent, A.D. Yuan Chwang reports that Persia "produces gold, silver, copper, rock-crystal, rare pearls, and various precious substances. The people are rich and affluent. They have many Shen horses and camels. They know how to weave silks, woolen stuffs and carpets. In commerce they use large silver pieces." (Beal, II, p. 278). Hence we may infer that the intercourse between India and Iran in the 7th cent. was not only cultural and political but also commercial in character.

ERRATA

Page	Line	For	Read
4	27	Lakshmi	Lakshmī
11	17	Forat	Forat.
13	6	months"	months'
17	28	(of Syria	(of Syria)
19	21	Afganistan	Afghanistan
20	20	Pārasikāṃsato	Pārasikāṃstato
21	3	broeaded	brocaded
24	7	Indian	Indians
29	25	Milindapanho	Milindapañho
31	26	pavatam	parvatam
33	fn.	Sāthahinā	Sārthahīnā
36	21	Schene	scene
36	27	p. 97	p. 69
37	7	chatuṣślā	chatuṣśāla
37	15	schene	scene
38	fn	Archep	Archeo
45	2 & 10	Taskurghan	Tashkurghan
52	30	Ganghara	Gandhāra
52	33	utokiahanch'a	Utokiahanch'a
53	19	Rājearī	Rājauri
53	28	sugh	Sūgh
57	14	cherchem	Cherchen
58	20	Pāṇḍava	Pāṇḍavaḥ
62	10	were	(to be deleted)
63	4	probably	probable
63	fn	far east	Far East
65	11	indianising	Indianising
66	fn	I. A. & L.	I. A. L.
67	6	Phettalug	Phettalung
70	8	wooe	wool
77	18	paṇyamārpya	paṇyamāropya
,,	fn	Satham	satthaṁ
79	10	made	was made
85	18	have	had
96	9	where as	whereas
104	18	His	This
105	14	the	(to be deleted)

Page	Line	For	Read
106	29	ours	our
108	24	Aurannobsas	Aûrannaboas
109	12	kan-nālu	kan-nādu
113	14	identfied	identified
115	8	bartared	bartered
123	fn	Msh	Mbh.
124	25	kaeāṭp	Kapāṭa
126	23	possibly by	possibly bounded by
130	fn.	Monimekalai	Maṇimekalai
131	24	whicsh	which
132	20	Romon	Roman
132	26	conjecturs	conjectures
132	31	oof	of
132	35	amphoree	amphorae
133	14	amphorac	amphorae
135	14	giagantic	gigantic
137	1	cappital	capital
137	fn.	Far Easf	Far East
139	9	Repson	Rapson
142	30	used	use
144	10	Pg	Fg
147	18	Kālidāsa also men	Kālidāsa also mentions Raghu to have conquered the Suhmas on the sea-shore.
150	8	Tamalities	Tamalites
153	10	llike	like
153	11	Bālaika	Bālhika
158	26	naigāmah	naigamāḥ
„	27	ward	word
163	20	Gondophornes	Gondopharnes
170	2	Sirculated	circulated
„	14	insrciption	inscription
174	12	land river	land and river
176	13	heads	beads
178	21	Gurtila	Guttila
182	23	situ	Situ
184	22	wiht	with
189	24	Pundranagara	Puṇḍranagara
190	16 & 32	karatoyā	Karatoyā
196	16	Ushavadāta "gifts"	Ushavadāta records "gifts

Page	Line	For	Read
198	18	Rapson H. I.	Rapson, C. H. I.
206	4	Veng	Veṅgi
207	27	nnt	not
210	4	gains	grains
216	20	hens	hence
221	13	Kālidās	Kālidāsa
228	20	areas Nelcynda	areas near Nelcynda
229	8	Srhips	ships
,,	16	sihpment	shipment
,,	19	king	kind
232	2	Tais	This
,,	7	gumalces	gum-a loes
233	14	mark-t	market
245	13	characteristic	characteristics
246	8	wese	were
252	17	Turquise	Turquoise
259	21	asvānīkena	aśvānīkena
,,	22	asvasādhanāḥ	aśvasādhanāḥ
260	2	As. II. xxy. 133	As. II. xxx, 133
266	13	described	describes
289	4	eall-gate	toll-gate
294	23	aclcounts	accounts
300	5	shell	shall
303	17	paṇyātām	paṇyānām
304	1	purchchase	purchase
320	9	Sovaḥ-ika	Sovanika

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